

CENTRE FOR INFORMATION TECHNOLOGY



Research Report

Title

influence of service quality dimensions on eCommerce in India

Submitted by

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STATEMENT OF AUTHENTICITY

I hereby declare that all the work done in the research is entirely done by me, except some parts that are duly identified and referenced in the report. The report complies with all requirements for this research such as ethics, coursework regulations, and instructions detailed in the program. I also understand and acknowledge the academic misconduct such as plagiarism and its consequences on the results of this report.

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ABSTRACT

Online shopping has become one of the most popular ways of shopping in the past decades. As the popularity increases, customer's expectations also rise from the e-commerce firms, and hence maintaining customer's trust, customer satisfaction level, and service quality has become equally important. This research mainly focuses on the factors that impact the eCommerce business in India and the dimensions that affect these factors. A total of 365 responses were collected from the online surveys showing the predicted hypotheses are accepted after the quantitative analysis. Positive impacts of service quality, customer's satisfaction and trust are determined with reliability as the most critical dimension for these factors. Also, people have given importance to other factors such as delivery, customer support, ease of use and website design while finding the dimensions that affect these factors. This research has discussed the method, methodologies, analysis, and conclusion for this research.

Keywords: Customer satisfaction, customers trust, eCommerce, reliability, responsiveness, SERVQUAL, service quality, tangibility

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GLOSSARY

C

Concept map: Diagram to show the flow of research literature review

E

E-commerce: Online Businesses (sometimes called Electronic commerce)

H

H: Hypotheses

M

MRQ: Main research question

P

PRISMA: a flow diagram of finalizing the literature for review

R

RQ: Research Question

S

Service Quality/SERVQUAL: Quality of services provided in a business

W

Web Business: Business that is done online through web portals.

1. Introduction

India is one of the largest nations in terms of population. Due to many youngsters in the country, the Internet is becoming equally important in India, which results in high usage of Internet applications. One such form is eCommerce. eCommerce is an electronic business, and in other words, the business done online or through the Internet is called eCommerce (Azmi & Phuoc, 2019).

As India is a country of people with a population of more than 1.3 billion, the user base of internet users is also huge. According to Statista (2020), the present internet users in India are more than 650 million and estimated to reach 950 million by 2025. With the advancement of technology and devices, the Internet is also accessible to many of the population. According to Kolathayar (2019), there were more than 850 million smartphone users in India by 2019 and continuously increasing by 10% annually.

With so many internet users and access to devices, the impact of the eCommerce business is enormous. The eCommerce business impacts all size of enterprises, whether small, medium, or large, and provides a vital source of finance, technology, and jobs. Indian eCommerce businesses are rapidly growing upward and expected to move over the US eCommerce business by 2034. There are expectations to surpass the US to become the second-largest eCommerce market in the world by 2034 (IBEF, 2021). eCommerce businesses have also brought some latest technology in the market like digital payments, logistics, analytics etc. Along with the Internet, many other advantages of eCommerce helped the business model become popular. These benefits include saving the cost of warehousing, labour, and commissioning and using social platforms to increase customer reach (Khurana, 2019).

Along with so many benefits, it is challenging to maintain sustainability in an eCommerce business model. The sustainability of a business may depend upon many different factors. As per Tripathi (2018), customers trust in the business, the satisfaction level of a customer, and service delivery are some significant factors that are important in eCommerce to grow.

This research follows the SERVQUAL method, and the base of this theoretical framework is the proposed method only. There are 21 survey questions based on an online survey system, and the analysis are done based on the responses received from participants in the survey questions. The presentation of data is done in a way that anybody can understand the data and

analysis by looking into the graphs and tables. The structure of this report is given below in table 1.

| Section Number | Section Name |
|----------------|----------------------|
| 1 | Introduction |
| 2 | Literature Review |
| 3 | Research Methodology |
| 4 | Analyses |
| 5 | Discussion |
| 6 | Conclusion |
| 7 | References |

Table 1: Report Structure

Table 1 shows the structure used in the research report, which is divided into seven chapters. The first chapter in this report is an introduction followed by a literature review, where the literature review from different articles is presented. The third section is the research methodology, where the methodology of this research is explained. The fourth section is the analysis, where the analysis is done on the data collected through the survey. The fifth section is discussion, where the whole report and conclusions are discussed, and finally, the references section shows all citations and references used in the report.

1.1. Research Aim

As eCommerce shopping becomes a popular choice among online consumers, the competition is also growing, increasing the demand for retaining a customer in the business (Disfold, 2020). Different factors impact the online business, like service quality, customer's satisfaction, and customer's trust (Tripathi, 2018). The research aim is to determine factors that may impact customer trust, satisfaction, and service quality that may further affect the overall e-commerce business directly or indirectly

1.2. Problem Statement:

eCommerce shopping becomes a popular choice among online consumers (Disfold, 2020). Maintaining brand value and increasing sales becomes more important for eCommerce businesses. As per Al-dweeri et al. (2017), Tangibility, reliability, empathy, assurance and responsiveness are important dimensions in eCommerce business that helps to gain customer's trust and satisfaction. While numerous measures can improve the overall service quality, customer's trust, and satisfaction, companies adopt all possible steps to ensure the best customer experience. There is still an increase in the number of unsatisfied customers in eCommerce and a decrease in the profitability of eCommerce companies (Livemint, 2017). The research shall explore the factors and dimensions that impact the eCommerce business in India.

1.3. Cost and Timeline

There is no financial cost attached to this research. The timeline for this project is estimated as per the plan in Figure 1. The output of the research shall be achieved by the end of semester 1, 2021.

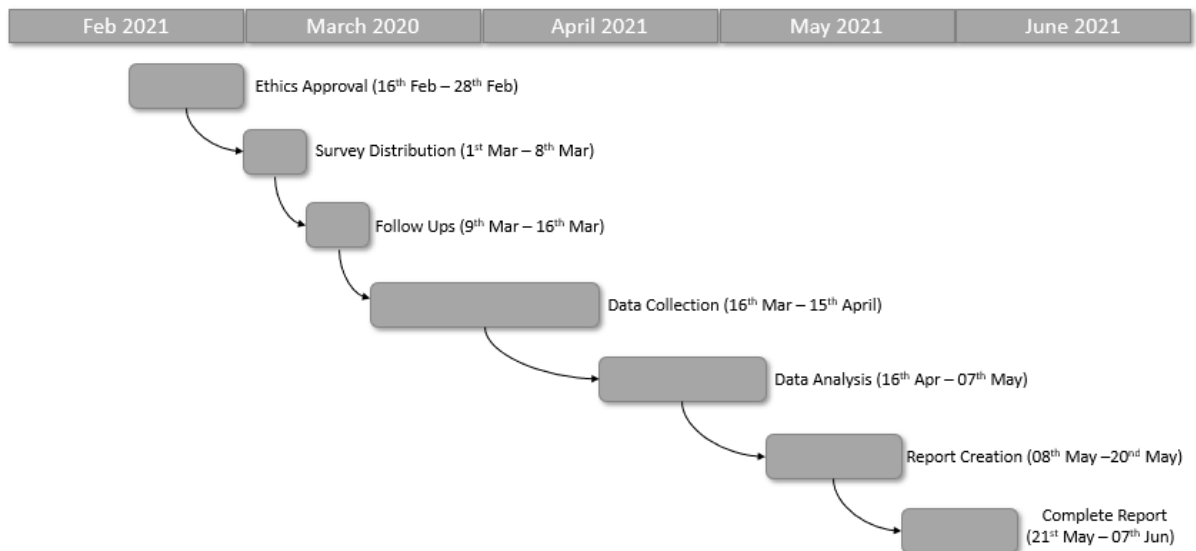


Figure 1: Research Timeline

Figure 1 is showing the distribution of the timeline amongst different phases of this research. The first phase was ethical approval from Waikato Institute of Technology's officials. The target date for this task was 28th February 2020. Survey distribution could only be started after the ethics approval, which would take at least a week. Therefore, the timeline for survey distribution was set from 1st March 2021 to 8th March 2021. As per the schedule, on 9th March 2021, follow-ups with participants were to be started. It was like a reminder for participants who had not participated. The target date to complete this task was 16th May 2021. For data collection total of 4 weeks were targeted, and for analysis, three weeks were required. After this report, creation and completion were targeted till 07th June 2021.

2. Literature Review

This chapter explains the impacts of service delivery, customer satisfaction, and customer trust on the overall eCommerce business through a literature review. The literature review consists of reasons for customer dissatisfaction due to a service delivery failure, Factors and dimensions that may impact the customer's satisfaction, customer's trust and overall service quality, and eCommerce business. Different themes and sub-themes divide the literature in more depth.

2.1. Search Strategy

This research is about the impacts of service quality and its dimensions on e-commerce business. The OneSearch online library & Google Scholar Library are explored to find the literature with keywords like eCommerce, service quality, customer satisfaction, and service quality. The search was based on filters like the articles should be peer-reviewed and published after 2000 to find relevant results. A total of 179 articles were found. After categorizing those 179 articles, 86 articles were selected for the literature review, which fits into the scope of this proposal.

Table 2 given below shows the selection and rejection criteria of the articles for this research.

| Inclusion Criteria | Exclusion Criteria |
|---|---------------------------------|
| 1. Full-text articles | 1.Uncompleted studies |
| 2. Articles published between the year 2000 to 2020 | 2. non-English |
| 3. Articles published in the selected database | 3. Outside the year 2000 – 2020 |
| 4. Article's language as English | 4. In an unrelated database |
| 5. Keywords: ECommerce + customer satisfaction + customer trust + SERVQUAL dimensions | 5. Articles not peer-reviewed |
| 6. Peer-reviewed articles | |

Table 2: Inclusion and Exclusion Criteria

2.2. Prisma Flow diagram

The literature review is conducted based on the PRISMA guidelines and protocols for inclusion and exclusion criteria.

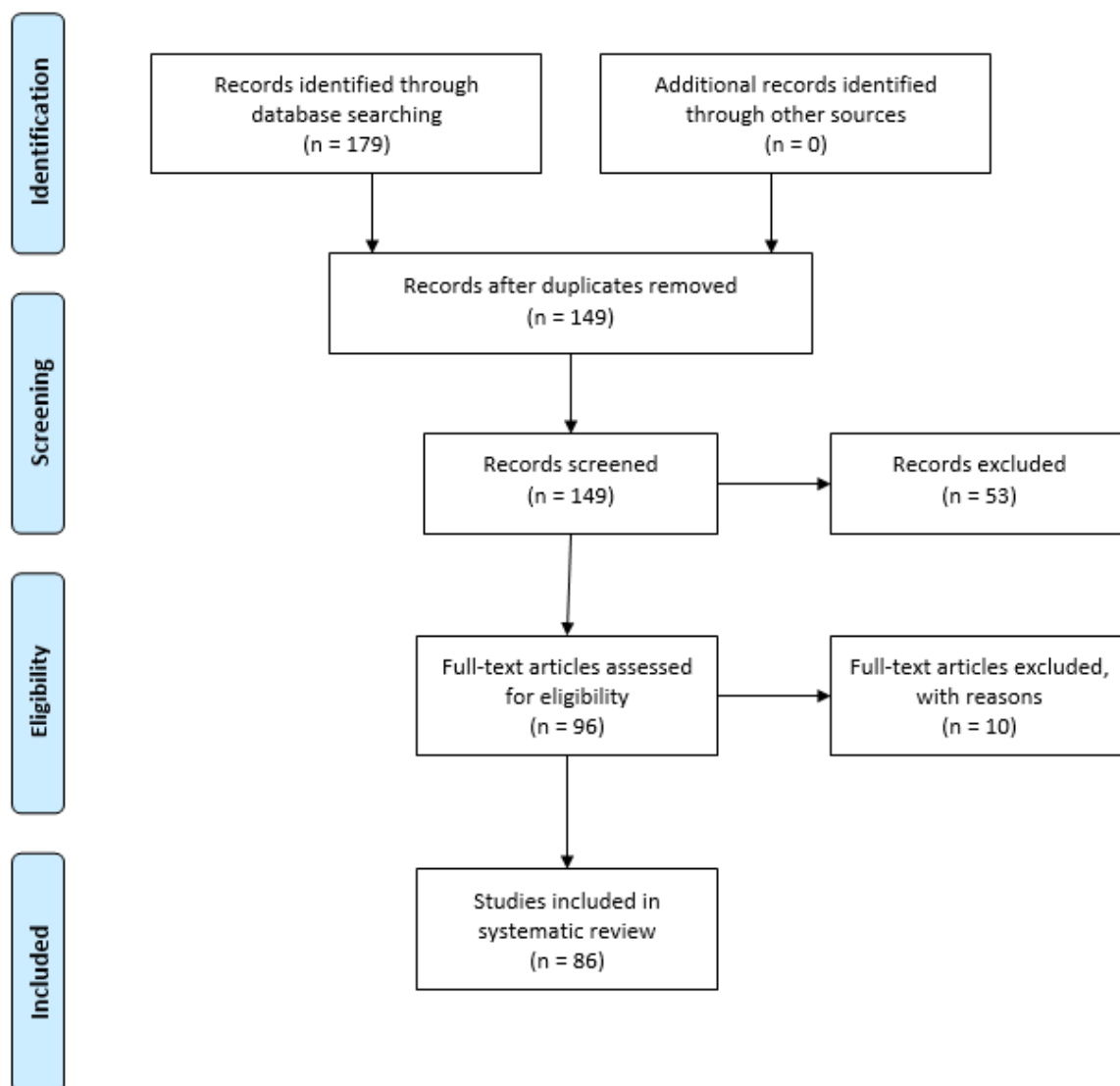


Figure 2: PRISMA Flow Diagram

2.3. Concept Map

Below given figure 2 presents the literature map in the graphical view.

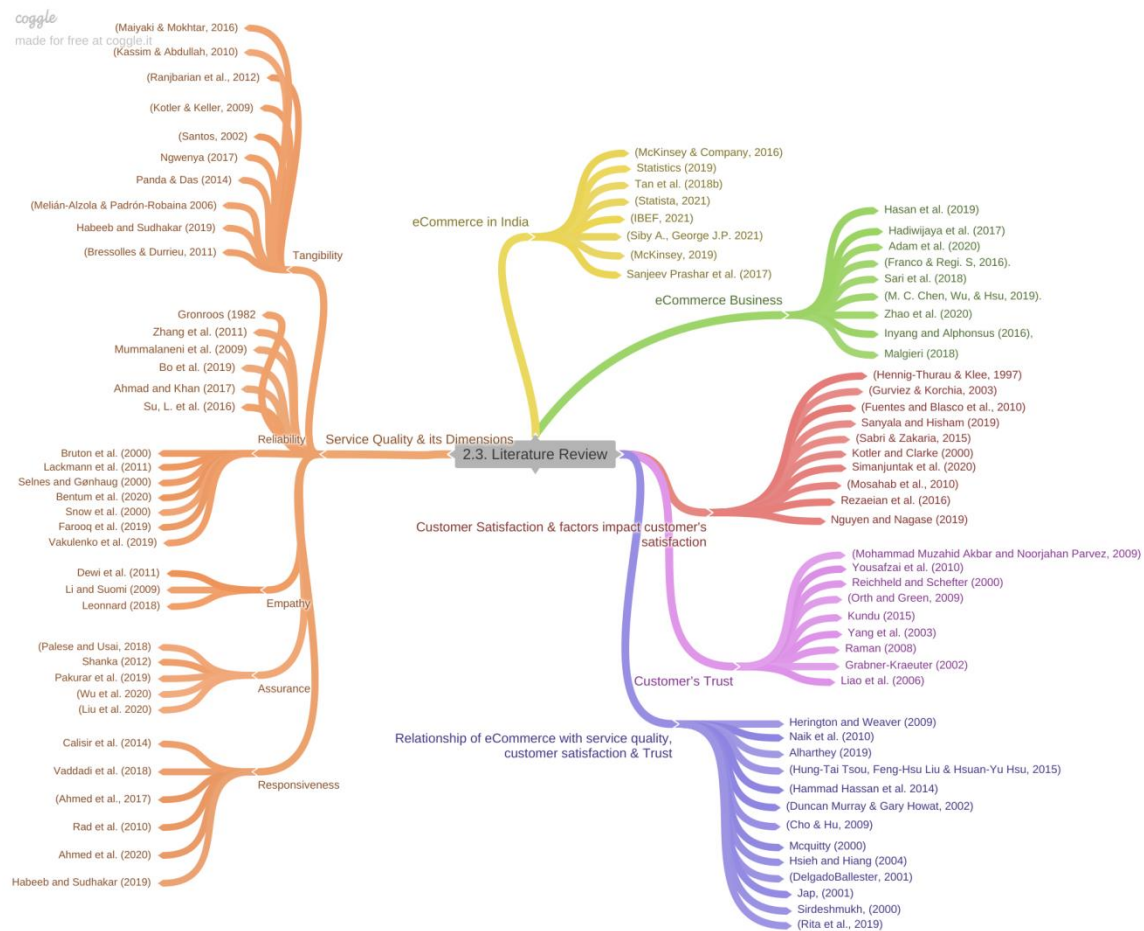


Figure 3: Literature Concept Map

Figure 3 presents the literature map, which shows all the literature attached to literature review sections. The focus is to find the impacts of service quality, customer's satisfaction, and customer's trust on an eCommerce business in India and the impacts of SERVQUAL dimensions on these factors. The first part presents the brief introductions with an introduction to eCommerce in India. The next sections explain the impacts of SERVQUAL dimensions on service quality, customer satisfaction, and customer trust.

Table 3 presents a protocol that is followed to make the research relevant, reliable, and used to get the best literature searches for the analysis.

| | |
|--|--|
| Background | eCommerce and factors that impacts eCommerce are the primary topics of this research. The critical dimensions and their impact on service quality, customer satisfaction, and customer trust are also the topics explored through this research. The literature review identifies the role of these factors and dimensions in the eCommerce business in India. |
| Research Aim | The research aim is to determine factors that may impact customer trust, satisfaction, and service quality that may further affect the overall e-commerce business directly or indirectly |
| Search strategy | To find the literature two databases are used. 1.) OneSearch from WINTEC and 2.) Google Scholar. English Articles that are Peer-reviewed and published between the year of 2000 to 2020 are used. The keywords such as eCommerce, SERVQUAL dimensions, customer's trust, customer's satisfaction, and service quality are used to search the articles. |
| Study selection criteria | <p>Study Selection Criteria</p> <ol style="list-style-type: none"> 1. Full-text articles 2. Articles Published between the year 2000 to 2020 3. Articles Published in the selected database 4. Article's language as English 5. Key words: ECommerce + customer satisfaction + customer trust + SERVQUAL dimensions 6. Peer-reviewed articles |
| Study selection procedures | The main topic and its dimensions were kept the central idea for the database searches. A checklist was used such as articles more than 2000 words, published within the year 2000 and 202, in the English language, have related keywords are used as the selection procedure. |
| Study quality assessment checklists | A proper selection procedure is followed with the checklist to access the quality. Also, the literature describes the data with references. |
| Data extraction strategy | The followed strategy to fetch the results from the database is to find the articles through Journal articles title, name, author and published date and year, summary, findings, and results. |
| Data Synthesis | Different combinations of terms are used to get relevant and reliable results. Such impacts of factors such as service quality, customer satisfaction and customer's trust are chosen, and then the impacts of the SERVQUAL dimensions on these factors are chosen to answer the research questions. The content, results, findings are reviewed before submission. |
| Dissemination strategy | For relevant and reliable results, a comparison between different articles are made and the refined framework as per the findings. MSWord is used to capture all the data and document it. |
| Project timetable | <pre> graph TD subgraph Timeline [Project Timetable] direction LR Feb2021[Feb 2021] March2021[March 2021] April2021[April 2021] May2021[May 2021] June2021[June 2021] end Ethics[Ethics Approval (16th Feb – 28th Feb)] Survey[Survey Distribution (1st Mar – 8th Mar)] Follow[Follow Ups (9th Mar – 16th Mar)] Data[Data Collection (16th Mar – 15th April)] Analysis[Data Analysis (16th Apr – 07th May)] Report[Report Creation (08th May – 20th May)] Complete[Complete Report (21st May – 07th Jun)] Ethics --> Survey Survey --> Follow Follow --> Data Data --> Analysis Analysis --> Report Report --> Complete </pre> |

Table 3: Protocols

2.4. Literature Review

This section presents different findings from the literature. The impacts of service quality, customer satisfaction and trust on eCommerce business are explained with the help of a relevant literature review. In section 2.4.1, the Overall eCommerce business and its growth are described, followed by sections 2.4.2, which explains the eCommerce business in India. Section 2.4.3. presents service quality and its five dimensions, i.) Tangibility ii.) Reliability iii.) Empathy iv.) Assurance and v.) Responsiveness. In the next section, 2.4.4, Customer satisfaction is presented, followed by section 2.4.5, which explains customer trust. Section 2.4.6 describes the relationship between Service Quality, Customer Satisfaction and Trust. Finally, in section 2.4.7, the conclusion of the research is presented.

2.4.1. eCommerce Business

The eCommerce business has overgrown worldwide. With the development of the Internet and technology, the need for more convenient elements also increased. Almost all significant contributors of civilization are moving to the Internet, including gaming, education, commerce, or business (Mohan, 2020). Online business (eCommerce) is snowballing, and companies have realized the need for a strong presence on the web (Luo et al., 2005).

The overall purchase process in eCommerce is that customers visit the website, browse the goods they need with the quantity required, make the payment and goods get delivered to the customers (Chen et al., 2019). The simplicity of the eCommerce process is the most significant advantage and convenience for its users along with other benefits such as convenience, timesaving, many options to buy from, easy to compare, easy to find review, prices, deals and many more (Franco & S, 2016).

Zhao et al. (2020) have considered eCommerce an integral part of human life that convene people's experience with its immense features that affect consumer buying habits. This study also suggests the number of users of Internet shopping is increasing by 14.3% every year in China.

As per Adam et al. (2020), more than 1 billion people purchased goods online, which increased to 1.8 billion by the year 2018, worldwide sales remained \$2.3 trillion and expected to reach \$4.88 trillion by the end of 2021.

According to a journal by Inyang and Alphonsus (2016), the benefit of eCommerce is not limited to customers only, and there are plenty of benefits of eCommerce for business owners. On the one hand, business owners can now extend their business to an endless

audience. This approach improves sales numbers along with decreased operational cost and a better brand image. On the other hand, customers can conveniently buy products online without any hassle of roaming around. The customer also obtains the benefits of competitive prices, personalized, timely delivery, better user experience, and a transparent reviewing system. Some benefits are given by Hendra et al. (2017), like 24X7 presence, overcoming geographical limitations, search engine support, and better marketing options.

But Malgieri (2018) explained the risks and limitations of eCommerce. As per this study, an eCommerce website takes user's personal information. With consent, websites can use the data for marketing purposes, which is itself a privacy breach. Cybercrimes are increasing every day, and eCommerce is one of the prominent victims of such crimes.

2.4.2. eCommerce in India

India is one of the biggest nations in the world, with an approximately 1.4 billion population (Statista, 2021). India is also one of the fastest growing economy in the world with 11.3% projected growth annually for the year of 2022 (IBEF, 2021). With such a big population size, the market has also increased for many businesses, including eCommerce. It has one of the biggest business markets in the world, with many unfolded opportunities for growth.

While the US and China have been the biggest exporters of eCommerce, India shows the most significant opportunities for eCommerce growth given by Tan et al. (2019). India has seen an immense development in technology and has impacted eCommerce growth in the country (Siby & George, 2020). As per the data recorded by Statista (2021) shown in the figure, India has the second-highest number of active internet users globally.

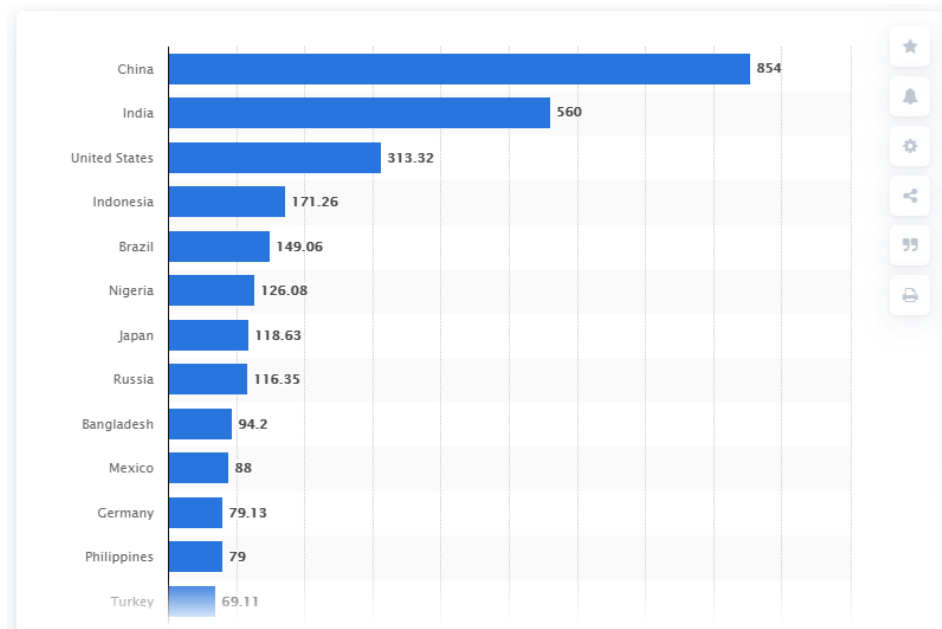


Figure 4: Number of active internet users (Statista, 2021)

As per McKinsey (2019), The economic value of the Indian eCommerce market is estimated to be \$1 trillion, which may result in 65 million new jobs in India by 2025. All thanks to the increasing internet penetration and mobile users in India. This report also suggests that India has the highest number of mobile phone users worldwide with one of the cheapest data plans.

India has already experienced a steep rise in online shopping through mobile phones and yet expected to see more growth within the population of age below 35 (McKinsey & Company, 2016). Prashar et al. (2017) suggested that the modifications due to the need for online retailers should be catered as per the need of the Indian market due to the enormous size and impact on the Indian eCommerce industry in the world.

2.4.3. Service Quality & its Dimensions.

In past years, the world has experienced a development in the Internet and eCommerce, creating a threshold for new business practices. As per Cox and Dale (2001), with eCommerce growth, the online companies emphasize supporting factors to eCommerce like virtual experience, service quality & customer satisfaction. This study also suggests the criticality of service quality and states that maintaining service quality and user experience have become critical aspects of running an online business. Retaining a customer becomes

more challenging if the quality of service is not up to the mark.

As per Ahmad and Khan (2017), quality of service is a crucial factor that decides customer satisfaction, which leads to retention of a customer in the business. Bo et al. (2019) indicated that companies now try to understand consumer behavior to give consumers the service quality as per their response. Some consumers can be satisfied with excellent graphics.

However, some require reliable information provided to them. Data mining and analytics are also becoming a part of service quality, and considering the importance of service quality, companies are focusing on improving service quality in every business.

As per Sari et al. (2018), Service quality is the most important factor that decides the customer's intentions to buy online or not. In the competitive environment, especially in a country like India, businesses must take an edge over other businesses to make their own business profitable. Better service quality may be the first step toward taking over competitive companies. As per Su et al. (2016), service quality is vital in the competitive market. While the players are increasing in the market, authors suggested that a business owner must take an edge over other businesses by providing the best service quality to its customers, which is crucial to impact the repurchase intentions. In the research by Hasan et al. (2019), the conclusion of this research suggests that there is a strong correlation between service quality and customer satisfaction. He also suggested that service quality (SERVQUAL) has five dimensions that decide customer satisfaction. 1.) tangibility, 2.) Reliability, 3.) Empathy, 4.) Assurance, and 5.) Responsiveness. Companies should focus on these five dimensions to ensure service quality, customer satisfaction and customer's trust in the business. Maintaining these dimensions can boost consumers' level of service quality, also suggested by Hasan et al. (2019). Figure 5 shows that five dimensions generate perceived service and expected service, which further generates perceived service quality.

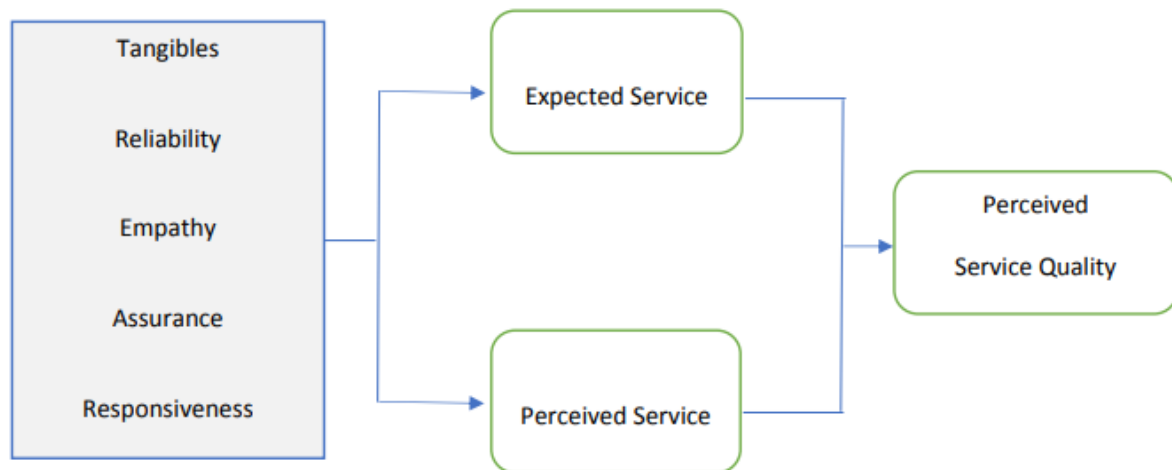


Figure 5: SERVQUAL Model (Ghotbabadi et al., 2015).

2.4.3.1. Tangibility

As per Panda & Das (2014), tangibility can be defined as a product or service visible and can be felt, and it is a critical factor in deciding factors for purchasing a product. These aspects are applied to business to improve the customer's overall satisfaction and be crucial in winning customer's trust. A study by Ngwenya (2017) suggested that it is the most critical dimension of service quality. This study happened in a hospital to find customer satisfaction with service quality. The results found that tangibility has become a significant factor where the buyers seem more satisfied when they get to see and feel the product and its quality. Therefore, it has proven to be one of the most critical factors for customers to make their purchases. In another study (Melián-Alzola & Padrón-Robaina, 2006), tangibility is an essential factor in perceived quality and affects a customer's purchasing choice. Also, Santos (2002) researched phone surveys on over 400 participants suggested that tangibility positively impacts the customer's perceptions about a business and products.

In an environment like eCommerce, where there is no physical communication between a seller and a consumer, the only interface is the website. And the design of the website becomes more important as the website design decides how easily a consumer and seller may communicate. According to Habeeb and Sudhakar (2019), the designer should design the website to get most of the required information on the product page only, which gives a user a feel of seeing the product closely. As per Kotler and Keller (2014), the website's design should be easy to access and appealing to create an excellent first impression. A structure can

be considered good if it provides correct information with easy access layout and speed to browse the website's content, satisfying customers' expectations (Ranjbarian et al., 2012). The design of the website is the combination of different components like text, graphics, colours together that makes the website appealing and easy to use for the user attracts the visitors to the website and give them a feeling of happiness which in turn is satisfaction for the customer (Dhingra et al., 2020). Moreover, a combination of other elements such as content and structure of a website can also be considered the website design that gives a pleasing experience to the user (Kassim & Abdullah, 2010). As per Maiyaki and Mokhta (2016), Website design can be regarded as the user interface developed for the visitors.

2.4.3.2. Reliability

As per Bruton et al. (2000), reliability can be defined as the effectiveness and consistency of the information. It is a significant factor in deciding the level of service quality in an organization. Also, Lackmann et al. (2011) define reliability as consistency of the business, its products and information provided to the customer. It is an essential factor in assessing the efficacy of the information that helps individuals make decisions. A reliable business attracts users to make purchasing decisions, and the organizations must understand the importance of reliability in building the customer's satisfaction and trust in the eCommerce business. Companies must make commitments to users to provide them with the best quality than their competitors, and the ability to fulfil the promises and commitments turns the business reliable. As per Selnes and Gønhaug (2000), reliability is all about keeping implicit or explicit promises.

Bentum et al. (2020) conducted a study on 567 participants, with 22 items and 5 Likert to know the importance of reliability in service quality. As a result, reliability stands as the most critical factor for customer satisfaction with 0.907 composite reliability.

In a virtual environment or eCommerce business, it becomes more important to make users trust the organization. Factors such as website availability Vakulenko et al. (2019), accurate and timely delivery of product and service, availability of the desired outcome, truthfulness about the price and discounts affect the overall reliability (Farooq et al., 2019).

2.4.3.3. Empathy

Empathy is the special attention given to the user; Empathy is a factor that makes the user feel at home or with someone who cares for him/her. It has become a significant factor in service quality. The user is given special treatment with a feeling of care that makes a user feel a personal touch with the organization and affects a user's repurchase decisions. As per Li and Suomi (2009), empathy is "*Care and individualized attention provided to customers*". Also, as per Leonnard (2018), empathy is 'understanding the need for an individual and showing personal care and interest.

Even though there is no physical connection or communication between a user and service provider, direct contacts are involved in the eCommerce business model. The user communicates through email and phone calls. Providing customers special treatment effects, the user's overall experience with the organization is an essential factor in customer's perception of the service quality without physical connection or communication. In a study conducted by Dewi et al. (2011), the results showed that empathy directly relates to user perception where empathized consumers led positive perception towards the business.

2.4.3.4. Assurance

The diversity of features and trustworthy information provided to customers generates a feeling of assurance from the organization to its customers, directly impacting their trust (Shanka, 2012). As per Pakurar et al. (2019), assurance is the ability of employees and the level of their knowledge to inspire trust and confidence amongst other employees & customers.

The knowledge of employees of an organization about product and service is a critical element of assurance (Wu et al. 2020). Assurance is a service quality factor that the organization sometimes neglects, but it's essential to impact buyers' satisfaction (Palese & Usai, 2018).

In the eCommerce business model, information is the key to success as there is no physical connection between the user and the organization's representatives. Here, the information provided to its customers impacts the overall experience and becomes the critical factor in decision making. Factors such as correct and timely information and knowledge about the organization and its products affect the assurance factor in an eCommerce environment (Liu et al. 2020).

2.4.3.5. Responsiveness

As per Vaddadi et al. (2018), Responsiveness can be considered the person's will to resolve customer issues and queries. It is a factor that impacts the service quality of any business, whether online or offline. A customer's expectation is always there that the company will respond to their queries and issues positively, timely and accurately. Responsiveness is all about time and accuracy, how quick and accurate the solutions are, and the better response that affects a user's overall satisfaction (Ahmed et al., 2017). Some examples that might impact an organization's responsiveness are providing a quick answer to a query, setting up an appointment, refunding the amount in case of cancellation, and sending the invoice to the customer on request (Calisir et al., 2014). It is one of the critical factors of service quality and for overall business success. The increase in customer responses has a likely positive effect on customers satisfaction (Rad et al., 2010). A study by Ahmed et al. (2020) suggested that responsiveness is a critical dimension of service quality where service on time gives satisfaction to customers. This study was conducted to find the patient's satisfaction with different dimensions of service quality. The study included 71 patients, where 65 patients (91.5%) were satisfied with the timely quality of service.

Responsiveness becomes a more critical factor in the environment where customers cannot reach physically business. And responses to customers are given through emails and calls only. As per Habeeb and Sudhakar (2019), only Customer support is the bridge between the customer and the organization.

2.4.4. Customer Satisfaction.

With the technological development, the challenges are also increased for the businesses to retain the customer. Customer satisfaction is the most critical factor in business profitability, and it plays a vital role in business success and leads to customer's trust and retention (Blasco et al., 2010). As per a *study* by Sanyala and Hisham (2019), 40% of eCommerce business revenue comes from returning customers. Customer retention or a repeat buyer indicates that the customer is happy with the product and service. He/she may convey the experience to other people, which will increase mouth-to-mouth marketing (Gurviez & Korchia, 2003). That leads to indirect or direct financial benefits (Sabri & Zakaria, 2015). Simanjuntak et al. (2020) described customer satisfaction as a condition or state that a user feels after fulfilling his/her expectations through timely response. He also states that customers are satisfied when the product or services it receives match his/her expectations. After

experiencing the services or products of a company after comparing them with the expectations, the evaluation made by the user can be called customer satisfaction (Mosahab et al., 2010). Rezaeian et al. (2016) suggest that many eCommerce companies apply many techniques and tools to know the satisfaction level. This study analyzed data through the clustering method on 1151 customers with 4 clusters and found out that customer retention is significant for keeping a business running.

In addition to this, Nguyen and Nagase (2019) conducted a study to determine the relationship between service quality and patient satisfaction. For this study, they analyzed data received from 516 patients, and through structured modelling, they observed a positive relationship between responsiveness and patient satisfaction. Their research also suggested that companies tried hard and devoted most resources to provide a quick, timely and accurate response to retain customers.

2.4.5. Customer's Trust

Kundu and Datta (2015) state that trust is a relationship model between 2 people. This model can be defined as one person's expectations and how another person reacts to the expectations. Yang et al. (2003) express trust as the confidence to rely on the exchange partner. Trust is the basis for any relationship between 2 people and is a critical variable in the definition of relationship (Orth and Green, 2009). However, there is no specific understanding and purpose for trust, and it may vary as per the domain. In a business context, trust is the belief and confidence of one party on the exchange party to fulfil the obligations and expectations (Raman, 2008). In business, trust is the pillar of the relationship on which business relies.

In e-commerce, trust becomes more critical in the decision behaviour where two parties do not communicate physically but on the Internet. Reichheld and Schefter (2000) stated that organizations must first gain their trust to retain customers. Researchers like Yousafzai et al. (2010) commented that lack of trust is critical for not buying products online from eCommerce websites. Information provided on the Internet is also essential for users. In the absence of accurate and complete information, organizations may lose trust if a consumer's trust does not stay on the website, and organizations lose customers due to improper information (Liao et al., 2006). Researchers found in their analysis that trust is a necessary element for long term relationships between different parties (Grabner-Kraeuter, 2002).

2.4.6. Relationship of eCommerce with service quality, customer satisfaction & trust

Many researchers have supported the facts in their studies that service quality positively impacts customer's satisfaction in the competitive environment where hundreds of eCommerce websites in Indian organizations are striving hard to maintain the satisfaction level of customers.

Herington and Weaver (2009) study successfully defined the positive relationship between service quality and customer satisfaction. Also, Naik et al. (2010) represented perceived service quality as an antecedent of customer satisfaction.

Customers must be satisfied to increase customer's purchase intentions and fulfil a customer organization that must ensure the best service quality (Alharthey, 2019). As per Tsou et al. (2015), customers' willingness to buy from the online store increases if the customer has experienced better service quality than other stores, ultimately feeling customer satisfaction. Researchers could identify the visible relationship between different research and studies, customer satisfaction, purchase intentions, and service quality. The improved service quality provides a feeling of purchasing satisfaction and makes positive purchasing intentions. This relationship among the three elements shows that customer satisfaction increases whenever there is better service quality, resulting in buying from the eCommerce site (Hassan et al., 2014).

Previous findings from the research suggest that customers satisfaction is affected by the level of service quality provided by the organizations. And Customer satisfaction works as a mediator between service quality and purchase intentions (Murray & Howat, 2002).

Trust may have a different understanding in different domains. In the eCommerce context, trust can be defined as fulfilling the users' expectations by the eCommerce businesses (Cho & Hu, 2009). Mcquitty et al. (2000) described the variance between expectations and results that decide the organizations' level of customers' trust. He has supported his comments with an example. When a customer is not satisfied with an existing product or service, he/she is using customer switches to another alternative because of customers' high expectations from the service quality.

Hsieh and Hiang (2004) state that customers are always expected to purchase a product or service that is reliable and trustworthy. Organizations these days try to build trust within their customer base. There are many things that an organization may do to make customers trust level. However, it is one of the challenging jobs that an organization must perform. As per Jap (2001), trust is an essential element in business and can be developed through consistent,

honest, and fair services or products. When customers find the responses and products from an organization accurate and fair, it builds their interest and trust in the organization, making the customer's purchase intentions. Many types of research have supported that trust has positive impacts on businesses or e-businesses; a study by Sirdeshmukh et al. (2000) considered an essential element to building a long-term relationship in the business. As per Cho and Hu (2009) research, the role of service quality and its dimensions on building customers trust is quite significant. Second, this study established the considerable role that service quality plays in forming customer trust. Also, the study (Rita et al., 2019) conducted to know the effects of service quality on customers satisfaction and customer trust used the extensive models of e-service quality that focused on customer behaviour and did not overestimate the other SERVQUAL attributes. This study suggested that service quality is the most critical factor that impacts customers satisfaction, customers trust and customers purchasing intentions.

2.4.7. Conclusion of the literature review

There is a positive relationship among all three factors that affect eCommerce: service Quality, Customer Satisfaction, and customer's trust. The literature review concluded that better service quality impacts both customer satisfaction and trust positively. On the other hand, customer satisfaction affects the trust of a customer in an eCommerce firm. Dimensions of service quality impact the purchase decision of a customer. Reliability and assurance are factors that increase trust in consumer behaviour. However, the level of customer's satisfaction can be increased with the dimensions like reliability, responsiveness, and empathy. All five dimensions are essential factors that might add to the business value. Also, from the literature, we could conclude that eCommerce is a business where direct physical involvement of a user does not happen. In that scenario, other factors such as website design, ease of use, and customer service also play an essential role in customer satisfaction.

3. Research Methodology

Research methodology is essential in research as it defines the overall structure of the research. Also, research methodology is the steps to collect and analyse data (O'Sullivan et al., 2007). This research methodology chapter presents the overall design of the research along with research methodology, followed by the analysis. The purpose of this study is given in section 3.1, followed by research questions and research designs in sections 3.2 and 3.3, respectively.

This study follows a quantitative approach with statistically significant surveys as the data collection method (Ishtiaq, 2019). In this study, the responses are collected from an online survey of users with experience with e-commerce companies in India.

3.1. Purpose of the Study

Different users might have different expectations from e-commerce companies, and hence, many factors may impact E-commerce business in India. Some of these factors include service quality, customer's trust, and customer's satisfaction. These factors further can be affected by the dimensions of service quality. These dimensions are the tangibility of products while shopping, reliability of e-commerce companies, empathy toward customers, assurance to customers, and responsiveness of such companies. All these dimensions directly or indirectly impact customer trust and satisfaction and overall service quality in the business. The primary objective of this research is to determine factors that may impact customer trust, satisfaction, and service quality that may further affect the overall e-commerce business directly or indirectly. By determining such factors, researcher will try to suggest solutions supported by the related studies and analysis. Along with finding the impacts of different factors, the objective of this study will also be to recommend improvements in the service quality of such firms to assure profitable business.

3.2. Research Questions

The primary and sub research questions are given below.

Main Research Question (MRQ): What are the impacts of service quality dimensions on E-commerce in India?

Sub Research Question 1 (RQ1): Does overall service quality impacts an e-commerce business in India?

Sub Research Question 2 (RQ2): Does customer's satisfaction impact an e-commerce business in India?

Sub Research Question 3 (RQ3): Does customer's trust impact an e-commerce business in India?

Sub Research Question 4 (RQ4): What service quality dimensions affect the Service Quality Most?

Sub Research Question 5 (RQ5): What service quality dimensions affect Customer Satisfaction Most?

Sub Research Question 6 (RQ6): What service quality dimensions affect the Customer's Trust Most?

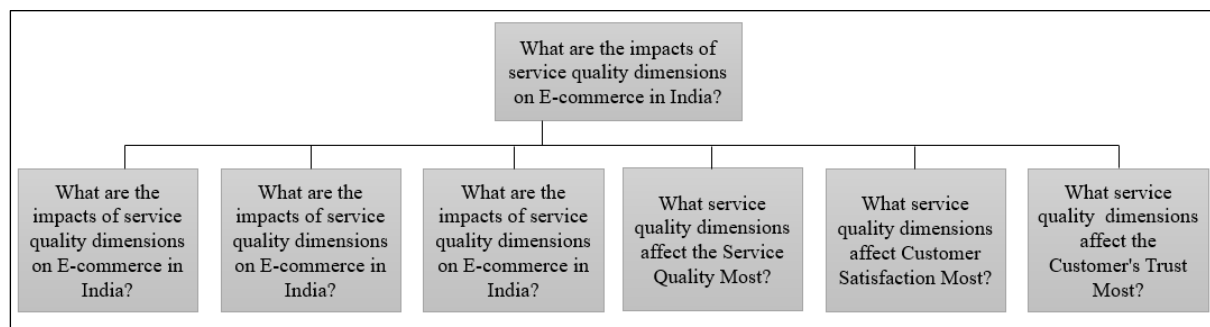


Figure 6: Research Questions

The main research question aims to explore the impacts of service quality dimensions on an eCommerce business. Sub Questions aim to find out the further understanding of how these dimensions effects different variables. Research question one is created to find if service quality impacts the eCommerce business in India. Research questions two and three further explore if customer's satisfaction and customer's trust impact the eCommerce business in India. The next three questions explore the dimensions that impact those factors.

3.3. Research Design

Research design is the blueprint of overall research where the processes and knowledge are gathered and arranged to find the answers to research problems. As per Abutabenjeh and Jaradat (2018), the research design is one of the most critical steps toward answering the research questions.



Figure 7: Research Design

In this research, three elements are worked upon understanding the research question, collecting the data to support the Hypotheses, and analyzing the data to determine an outcome. Peer-reviewed literature is used with the data received from many participants to find the answers to the research questions and Hypotheses.

3.4. Research Model

SERVQUAL is one of the most popular models in service quality. Parasuraman, A. (1988) first developed it. As per Butt and Run (2010), this approach is considered the critical factor that switched traditional perception-based measures to a service quality gap predictor.

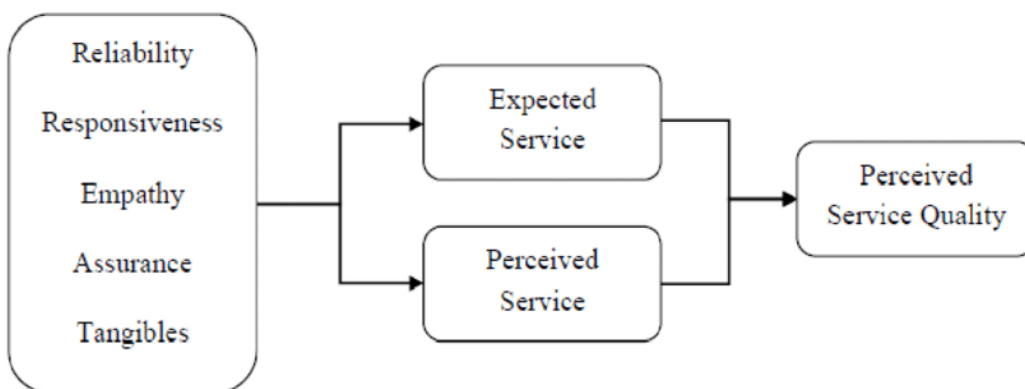


Figure 8: Default SERVQUAL Model (Ghotbabadi et al., 2015).

The above model gives in figure 8 helps to find the impacts of five dimensions of service quality on Expected service and Perceived service that further defines the perceived service quality.

However, for this research, a default SERVQUAL model is modified as per the research problem.

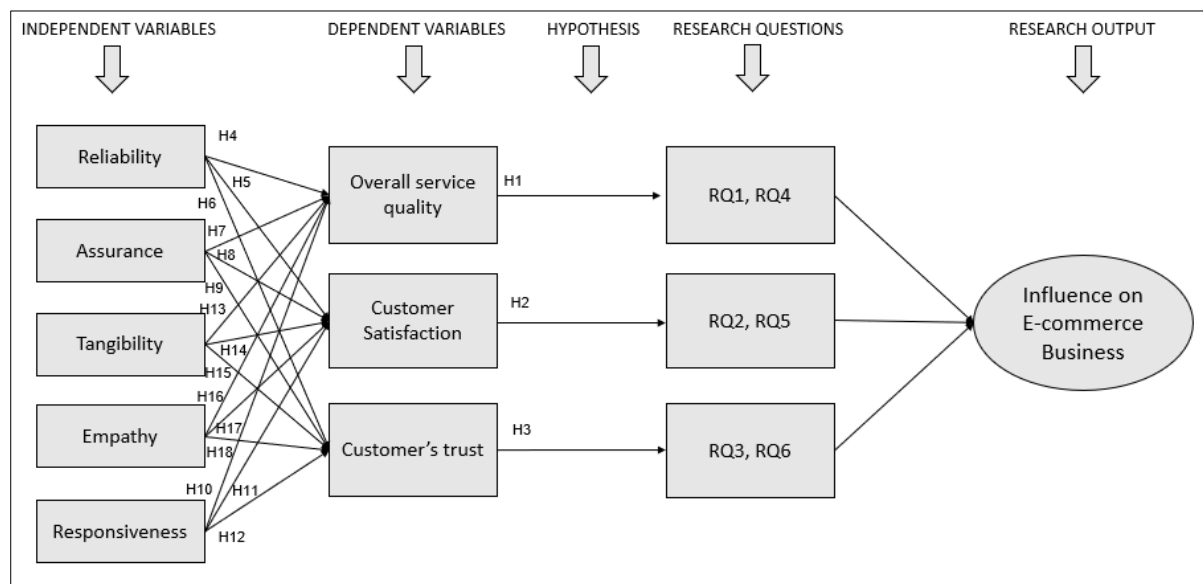


Figure 9: Modified SERVQUAL model

In this modified SERVQUAL model given in figure 9, The independent variables are the five dimensions of the service quality that may influence service quality, customer's satisfaction, and customer's trust. The effect of these dimensions may further impact or influence eCommerce business. Literature review section 2.4 shows that service quality dimensions influence service quality, customer's satisfaction and customer's trust. Researcher wants to know that is their any positive connection between the service quality dimensions and three factors. The dependent variables are also shown as important factors that lead to success or failure of an eCommerce business which are service quality, customer's satisfaction and customer's trust. How these factors influence ecommerce business is an base of the modified SERVQUAL model.

3.5. Hypotheses

Hypotheses are considered one of the most important research tools that helps decide the gaps between truth and false. Gasparyan et al. (2019) define a Hypotheses as a well-argued analysis that provides the scientific explanation of existing facts. A Hypotheses provides an understanding in the research of what is to be researched. It can be proven correct partially or fully or even can be proven wrong partially or fully. The only ethical requirement for correct Hypotheses Is the authors' honesty about the limitations of their suggestions.

Table 4 below presents the hypotheses for the independent and dependent variables based on the modified SERVQUAL model given above in figure 9.

| Variables | Research Question # | Hypotheses # | Hypotheses |
|-----------------------|---------------------|--------------|---|
| Service Quality | RQ1 | H1 | There is a relationship between service quality and e-commerce business |
| Customer Satisfaction | RQ2 | H2 | There is a relationship between customer satisfaction and e-commerce business |
| Customers Trust | RQ3 | H3 | There is a relationship between customer trust and e-commerce business |
| Reliability | RQ4 | H4 | There is a relationship between reliability and service quality |
| | RQ5 | H5 | There is a relationship between reliability and customer satisfaction |
| | RQ6 | H6 | There is a relationship between reliability and customer trust |
| Assurance | RQ4 | H7 | There is a relationship between assurance and service quality |

| | | | |
|----------------|-----|-----|--|
| | RQ5 | H8 | There is a relationship between assurance and customer satisfaction |
| | RQ6 | H9 | There is a relationship between assurance and customer trust |
| Responsiveness | RQ4 | H10 | There is a relationship between responsiveness and service quality |
| | RQ5 | H11 | There is a relationship between responsiveness and customer satisfaction |
| | RQ6 | H12 | There is a relationship between responsiveness and customer trust |
| Tangibility | RQ4 | H13 | There is a relationship between tangibility and service quality |
| | RQ5 | H14 | There is a relationship between tangibility and customer satisfaction |
| | RQ6 | H15 | There is a relationship between tangibility and customer trust |
| Empathy | RQ4 | H16 | There is no relationship between empathy and customer satisfaction |
| | RQ5 | H17 | There is a relationship between empathy and customer satisfaction |
| | RQ6 | H18 | There is no relationship between empathy and service quality |

Table 4: Hypotheses mapping with Variables and Research questions

Multiple hypotheses are created and tested in this research to be proven correct or wrong that may be partially or fully.

3.6. Hypotheses and Sub-Research Questions

The given table 5 shows the Hypotheses as per the Sub Questions.

| Sub-Research Question | Hypotheses |
|-----------------------|-----------------------|
| RQ1 | H1 |
| RQ2 | H2 |
| RQ3 | H3 |
| RQ4 | H4, H7, H10, H13, H16 |
| RQ5 | H5, H8, H11, H14. H17 |
| RQ6 | H6, H9, H12, H15, H18 |

Table 5: Link between Hypotheses and Sub-Questions

Table 5 presents the link between the Hypotheses and their relative Sub-Questions. Column "Sub-Research Questions" shows the number of the research question, and Column "Hypotheses" Shows the number of Hypotheses link to that sub-question.

3.7. The link between Research Question, Sub Question, Survey Question, Literature reviews and Survey Questions

Table 6 presents the links among questions, sub-questions, literature review and survey questions.

| Research Question/ Sub-Question | | Literature Review | Survey Question |
|---------------------------------|-----|---|-----------------|
| Main Research Question | SQ1 | 2.4.1, 2.4.2, 2.4.3, 2.4.3.1, 2.4.3.2, 2.4.3.3, 2.4.3.4, 2.3.4.5, 2.4.6 | Q3, Q4, Q5, Q16 |
| | SQ2 | 2.4.4, 2.4.6 | Q3, Q8, Q9, Q18 |
| | SQ3 | 2.4.5, 2.4.6 | Q3, Q6, Q7, Q17 |
| | SQ4 | 2.4.3, 2.4.3.1, 2.4.3.2, 2.4.3.3, 2.4.3.4, 2.3.4.5, 2.4.6 | Q12, Q13, Q20 |
| | SQ5 | 2.4.4, 2.4.3.1, 2.4.3.2, 2.4.3.3, 2.4.3.4, 2.3.4.5, 2.4.6 | Q10, Q14, Q19 |
| | SQ6 | 2.4.5, 2.4.3.1, 2.4.3.2, 2.4.3.3, 2.4.3.4, 2.3.4.5, 2.4.6 | Q11, Q15, Q21 |

Table 6: Link between question, sub-question, literature review and survey question

In the above-given table 6, there are three columns. In the first column of the table, the main question and sub-questions are given. In the second column, the literature review section is given that helped to answer the questions and sub-questions. In the last column, survey question numbers are assigned to answer the questions and sub-questions of the research.

3.8. Research Tool and Survey Method

The primary purpose of conducting this survey is to determine the impacts of different factors on e-commerce business in India. For this purpose, A quantitative approach is followed in the research, where an online survey is used to collect information from participants. Total 21 questions are asked to participants, including two verification questions that let only 18 and above years participants and users shopped online from Indian sites to participate. The survey is created on the Qualtrics tool. SERVQUAL is the primary research method used where five independent and three dependent variables are examined for the impacts on eCommerce business in India.

3.9. Research Approach

Abutabenjeh and Jaradat (2018) explained the research approach as the plan and procedure to achieve the critical research steps: data collection, data analysis, and assumptions. The selection of the research approach is as important as the fundamental research. The right research approach is the first step toward the success of the study. As per Grover (2015), there are three types of methods to conduct research which are Quantitative, Qualitative and Mixed Methods.

Albers (2017) defined Quantitative research as research that is based on numeric data. The collection and analysis in this research type are based on numeric values. At the same time, qualitative research is based on non-numeric data analysis. As per Aspers and Corte (2019), the research involves collecting and analyzing non-numeric data called Qualitative research. The research is genuinely based on concepts, opinions, or experiences.

On the other hand, mixed-method research is knowledge beyond what is received from both qualitative and quantitative. As per Timans et al. (2019), knowledge acquired beyond quantitative and qualitative research is called mixed-method research. As this data collection method in this research is surveys and analyses are based on the numeric values, this research is based on quantitative research method. The selection of the quantitative research method is done after analysing the worldviews given by Creswell (2012).

| | |
|---|---|
| Postpositivism | Constructivism |
| <ul style="list-style-type: none"> • Determination • Reductionism • Empirical observation and measurement • Theory verification | <ul style="list-style-type: none"> • Understanding • Multiple participant meanings • Social and historical construction • Theory generation |
| Advocacy/Participatory | Pragmatism |
| <ul style="list-style-type: none"> • Political • Empowerment Issue-oriented • Collaborative • Change-oriented | <ul style="list-style-type: none"> • Consequences of actions • Problem-centered • Pluralistic • Real-world practice oriented |

Figure 10: Philosophy worldview (Research Design, Creswell 2014)

Along with the method, the research process is also critical. Figure 11 is used to explain the methodology used in the research.

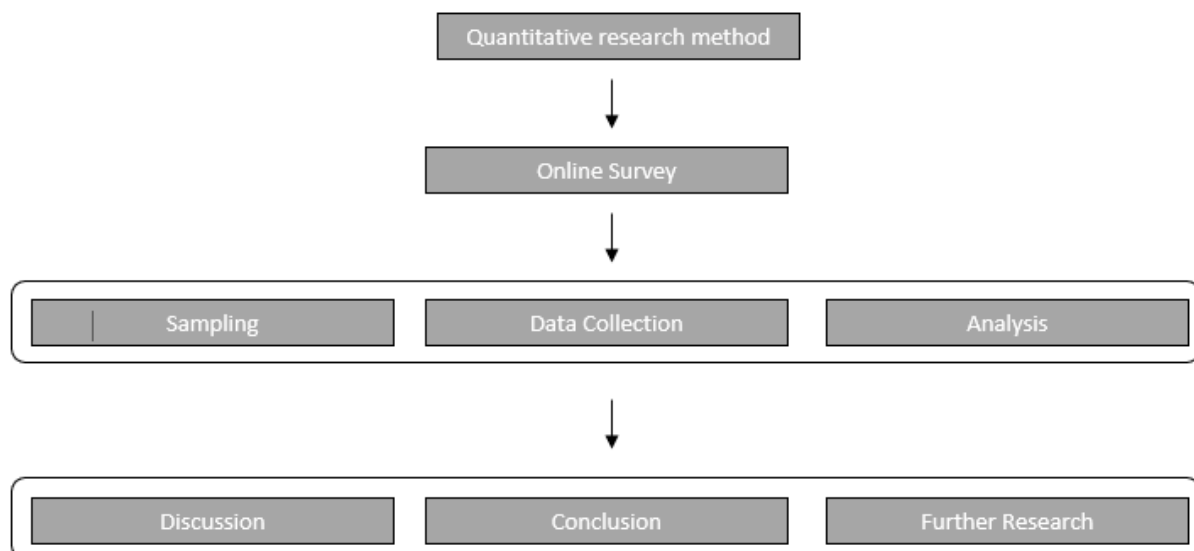


Figure 11: Research process.

In this research, based on the quantitative research method, online surveys are used to collect the data from participants. In this process, the selection of samples was made based on the criteria used in this research after sampling data was collected and then analyzed, which was further discussed and concluded. Finally, further research is decided which would add to the existing research.

3.9.1. Eligible participants

The eligibility for participation in the survey created for this research is people above 18 and have at least shopped once online from Indian eCommerce companies within the last year.

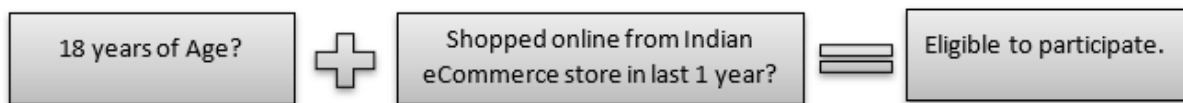


Figure 12: Eligibility Criteria

3.9.2. Sample Size

According to Keelery (2016), the number of Internet users in India in August 2020 was more than 600 million. Based on this data and the formula, including the population size, confidence interval 4, and confidence level 95%, a sample size of 600 respondents was sufficient to analyze the results. A free tool on www.surveysystem.com is used to calculate the sample size.

Determine Sample Size

Confidence Level: ☒ 95% ☐ 99%

Confidence Interval:

Population:

Sample size needed:

Figure 13: Sample Size Calculator (Creative research system, n.d.)

The responses for this survey remained low as per the expected sample size. There might be different reasons behind the low number of responses, as the interest or availability of the participant. Also, The current situation in India is devastating due to covid 19, which might

also be a reason for the lower number of responses. In a post on 27th April 2021, Tapaleao (2021) from New Zealand Herald published news about the situation of India in the pandemic and reported more than 350000 cases in a single day with more than 2000 casualties.



Figure 14: Covid situation in India by Tapaleao (2021)

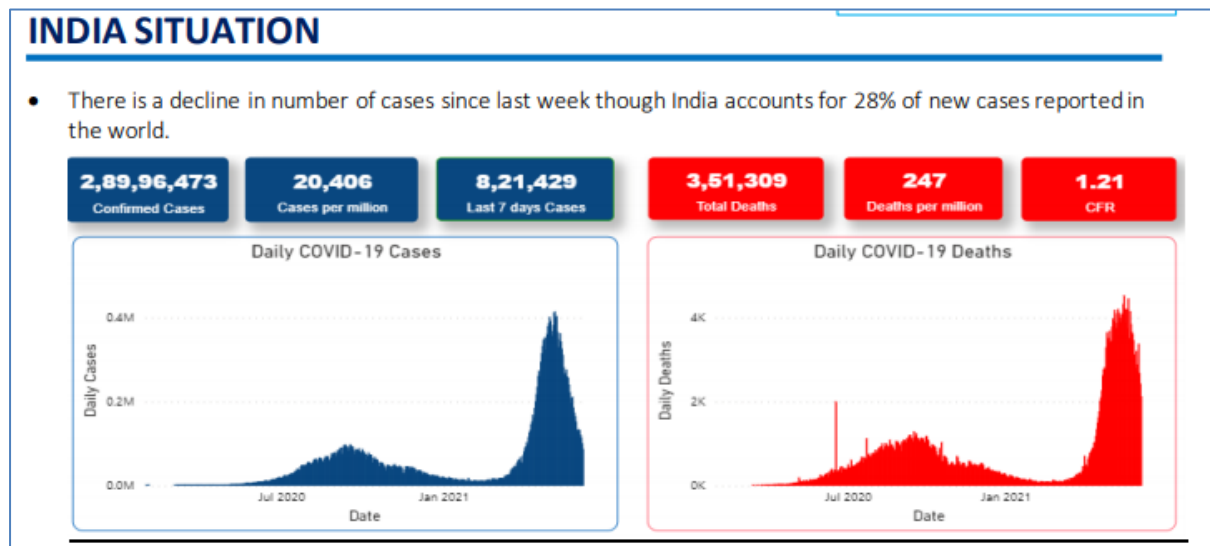


Figure 15: Situation in India by W.H.O. (W.H.O., 2021)

Also, WHO (World Health Organization) published a report (W.H.O., 2021) on 9th June 2021, in which the total cases to date are more than 20.50 million, with approximately 3.5 million deaths. In another report by Stewart (2021), the situation of India is called devastating due to the second wave of coronavirus.

The situation in India could be a reason for collecting 404 low responses than the expected number. In this research, the researcher was able to get 404 participants in total.

3.9.3. Data gathering

Statistically significant online surveys are used to collect the data. Different channels are used to send the survey link to the participants such as emails, social media websites and other online channels. All the compliances are met and an approval on the ethics was taken from the Waikato Institute of Technology before collecting the data for this research.

3.9.4. Survey Participation Eligibility Flow

The survey eligibility criteria are based on two questions. Whether the participant is 18 years of age and shops online from an Indian store in the last year is considered eligible for the survey.

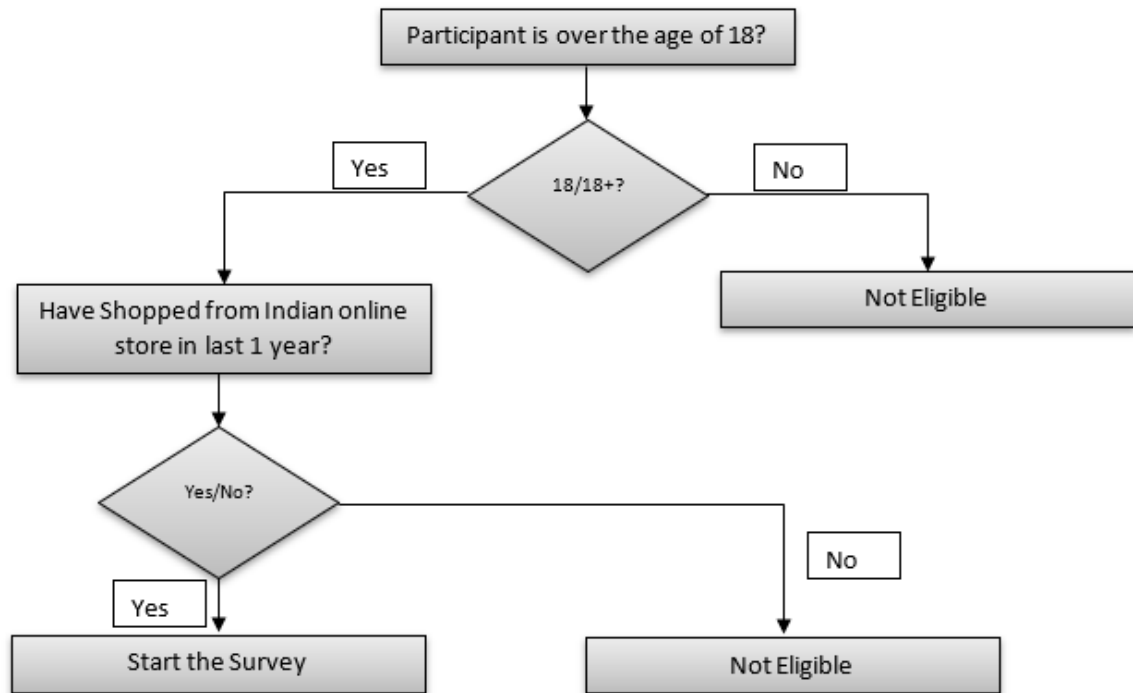


Figure 16: Survey Eligibility Flow Diagram

3.9.5. Survey Responses.

In this subsection, the total number of participants, participants who dropped the survey, participants over the age of 18 and who have shopped online from Indian eCommerce stores are analyzed.

3.9.5.1. Number Responses analysis.

Table 7 presents the total number of respondents, a sum of people who dropped the survey without answering any questions and people who answered the first question.

| # | Responded | % | Count |
|---|------------------------------|---------|-------|
| 1 | Dropped | 3.97% | 16 |
| 2 | Responded | 96.03% | 388 |
| 3 | Total Number of Participants | 100.00% | 404 |

Table 7: Total number of responses

In figure 17, the total number of people who opened the survey was recorded as 404. However, some people dropped the survey without answering any question. The number of such people was 16, which was 3.97% of the total number of participants. 96.03% of that number responded to at least one question in the survey, making it 388 participants.

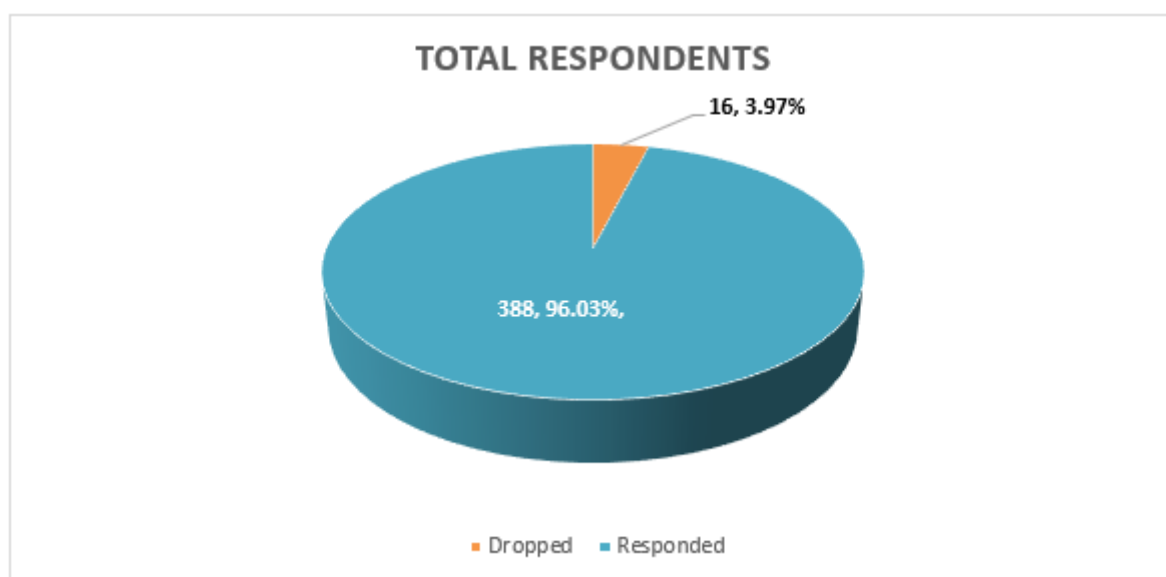


Figure 17: Total Responses for the survey

3.9.5.2. Age Eligibility Criteria Analysis.

The first question in the survey was to check the eligibility of users to participate in the survey. The first eligibility check was the age of a user. Users who are 18 years or above were considered eligible for the survey. In table 8, the total number of participants are the combination of participants who responded Yes and No. The numbers are given in count and in percentage.

| S# | Answer | % | Count |
|----|--------|--------|-------|
| 1 | Yes | 95.62% | 371 |
| 2 | No | 4.38% | 17 |
| 3 | Total | 100% | 388 |

Table 8: Eligibility of participation through age

Table 8 and Figure 18 presents that the total number of participants who have responded to this question in either Yes or No. The total number of respondents was 404, out of which 388 responded to the question. Out of 388 total respondents, 371 have answered Yes which means that 95.62% of the participants are of age 18 or above. The remaining 17 (4.38%) people responded as No, which means the age of the participants was below 18 and hence these participants were not eligible to participate in the survey.

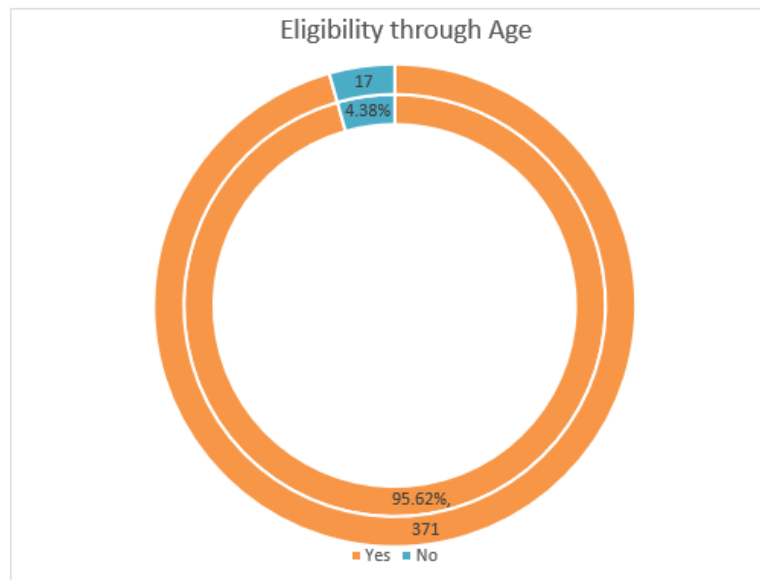


Figure 18: Participants Age

3.9.5.3. People who shopped online from an Indian store in the last year.

The second question in the survey was to check the eligibility of participants to participate in the survey. This second question was to check if participants have shopped online from an Indian eCommerce sites within the last year. In table 9 total number of participants is a combination of participants who responded Yes and No. The numbers are given in count and in percentage.

| S# | Answer | % | Count |
|----|--------|--------|-------|
| 1 | Yes | 88.49% | 323 |
| 2 | No | 11.51% | 42 |
| 3 | Total | 100% | 365 |

Table 9: Eligibility of participation through the online shopping experience

Table 9 and Figure 19 presents the total number of participants who have responded to question 2, either Yes or No. The total number of respondents was 404, out of which 388 responded to question 1 and 365 responded to question 2. Out of 365, 323 respondents have

answered in Yes which means that 323 participants, which is 88.49% of total participants have shopped at least one time from an Indian eCommerce business in last one year. These participants are considered eligible for the participation in the survey. The remaining 42 (11.51%) people were not eligible to participate in the survey as these participants have answered as No to the question.



Figure 19: Participants Online Shopping Experience

4. Analysis

This chapter presents the analysis of the data gathered through online surveys. The gathered data from the surveys are analysed in a descriptive manner that is easy to understand.

Furthermore, analysis of the data received on each survey question is linked to the sub-questions of this research given in Table 6.

4.1. Chronbach's Alpha Testing

A Cronbach's alpha analysis is performed to test the reliability of the survey. As per Statistics-how-to (2021), Cronbach's Alpha measures how closely a set of variables are related as a group. Therefore, it is imperative to know the reliability of the survey with the consistency of answers. In this analysis, all the questions with predefined values are tested. Questions with descriptive answers could not be analysed in Cronbach's alpha testing.

| Participants | Variance |
|--------------|-------------|
| Q1 | 0.041894728 |
| Q2 | 0.101827735 |
| Q3 | 0.8259 |
| Q4 | 0.691132267 |
| Q6 | 0.646258503 |
| Q8 | 0.614474826 |
| Q10 | 2.403117442 |
| Q11 | 2.858398438 |
| Q12 | 3.461911357 |
| Q13 | 3.363598501 |
| Q14 | 3.136604663 |
| Q15 | 3.297190083 |
| Q16 | 1.067739319 |
| Q17 | 0.954570038 |
| Q18 | 1.099813713 |

| | |
|-------|-------------|
| Q19_1 | 0.894248858 |
| Q19_2 | 2.281378031 |
| Q19_3 | 1.740303172 |
| Q19_4 | 1.7724626 |
| Q19_5 | 1.949876543 |
| Q20_1 | 0.776982196 |
| Q20_2 | 1.196095227 |
| Q20_3 | 1.192932099 |
| Q20_4 | 1.151653832 |
| Q20_5 | 0.915234578 |
| Q21_1 | 0.723469084 |
| Q21_2 | 0.925583673 |
| Q21_3 | 0.857625744 |
| Q21_4 | 0.982041522 |
| Q21_5 | 0.849797411 |

Table 10: Chronbach's Alpha Testing

Variables are first given a value, and variance for every participant is calculated. The descriptive answers of question number 5,7 & 9 could not be analysed as these answers could not be assigned with a value. After generating all the values, the below-given formula was applied to know the Cronbach's alpha value.

| Variable | Description | Values | Internal Consistency |
|----------------|---------------------------------|-------------|----------------------|
| K | Sum of the items | 30 | Excellent |
| $\sum_i s^2_y$ | Sum of the item variance | 42.77411618 | |
| y | The variance of the total score | 415.5296259 | |
| A | Chronbach's alpha | 0.926963252 | |

Table 11: Chronbach's Alpha Calculations

The Cronbach's alpha value for this survey was 0.92, which suggests an excellent condition based on table 12 described by Statistics how to (2021)

| Cronbach's alpha | Internal consistency |
|-------------------------|----------------------|
| $\alpha \geq 0.9$ | Excellent |
| $0.9 > \alpha \geq 0.8$ | Good |
| $0.8 > \alpha \geq 0.7$ | Acceptable |
| $0.7 > \alpha \geq 0.6$ | Questionable |
| $0.6 > \alpha \geq 0.5$ | Poor |
| $0.5 > \alpha$ | Unacceptable |

Table 12: Internal Consistency Table (Statistics-how-to, 2021)

4.2. Factors matter the most while shopping online.

The third question aims to know a participant's perspective about the factors that matter most during online shopping. This question helps answer sub-question 1,2 & 3. The main idea is to know which factors among service quality, customer satisfaction, or customers trust do customers consider the most before selecting an online platform for shopping.

Table number 14,15 and Figure number 21,22 presents the received data from question number 3.

In table 13, the total respondents are the combination of people who responded and skipped the question. Count and percentage both are used to analyse the data and is given in the below table.

| Description | % | Count |
|--|------|-------|
| Total Respondents | 100% | 365 |
| Total Responses Received | 85% | 309 |
| People did not respond to the question | 15% | 56 |

Table 13: Number of Question Respondents for Question 3

Figure 20 presents the division of the total number of participants who responded to the question by selecting one or multiple answers and who skipped the question. The total number of respondents who were eligible to participate in the survey is 365. Out of 365 respondents, 309 participants, which is 85% of the total have answered the question, while other remaining 56, which makes up 15% of total respondents, skipped the question.

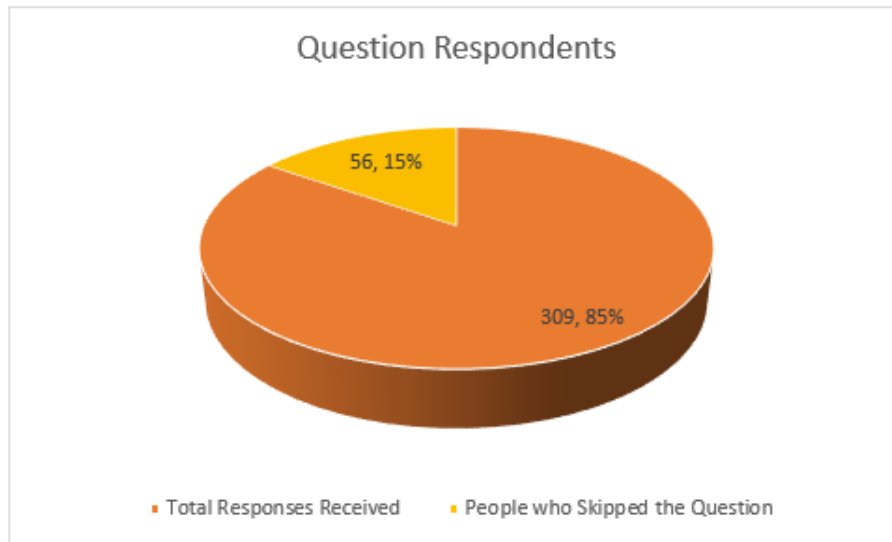


Figure 20: Number of Question Respondents (Question 3)

In table 14, respondent's answers are summed up and presented in percentage and count. Some people have selected individual responses, while others have chosen the combination of 2,3 or all the answers. This means that for some people, single factor is not enough to make their decision while choosing online business for their shopping but a combination of two or more is preferred.

| S# | Answers | % | Count |
|----|--|------|-------|
| 1 | Service Quality of e-commerce firm | 32% | 98 |
| 2 | Level of customer's satisfaction | 19% | 59 |
| 3 | Level of customer's trust in e-commerce business | 11% | 33 |
| 4 | None of the above | 3% | 11 |
| 5 | Service Quality of e-commerce firm + Level of customer's trust in e-commerce business | 4% | 12 |
| 6 | Service Quality of e-commerce firm + Level of customer's satisfaction | 10% | 32 |
| 7 | Service Quality of e-commerce firm + Level of customer's satisfaction + Level of customer's trust in e-commerce business | 21% | 64 |
| | Total | 100% | 309 |

Table 14: Factors impact eCommerce (Q3)

Figure 21 graph represents the numbers visually, where the choices for people can be identified.

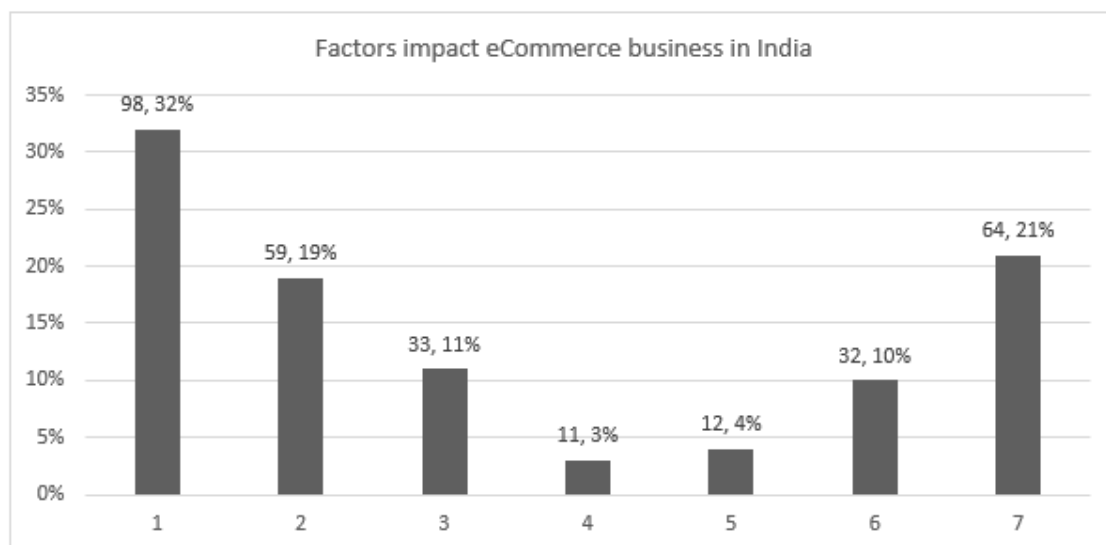


Figure 21: Factors that impact the eCommerce Business in India.

In Figure 21, each division of the figure presents the answers of the participants. 32% of the total solutions were selected as service quality. however, other 4%, 10% and 21% of people also have selected service quality, but for them, along with service quality the combination of some other factor is also important. However, 3% of people have chosen that none of the elements is crucial for them while shopping online.

The number of times each factor is selected by a participant is also given in the table 15. Which was analysed to know that how many times a single factor is selected by the users and how much important is the factor for the participants.

| Answer | % | Count |
|--|--------|-------|
| Service Quality of e-commerce firm | 42.12% | 203 |
| Level of customer's satisfaction | 32.57% | 157 |
| Level of customer's trust in e-commerce business | 22.61% | 109 |
| None of the above | 2.70% | 13 |

Table 15: Factors impact eCommerce business in India individually (Q3)

Figure 20 presents the contribution of every factor individually in the decisions to select the online business for shopping.

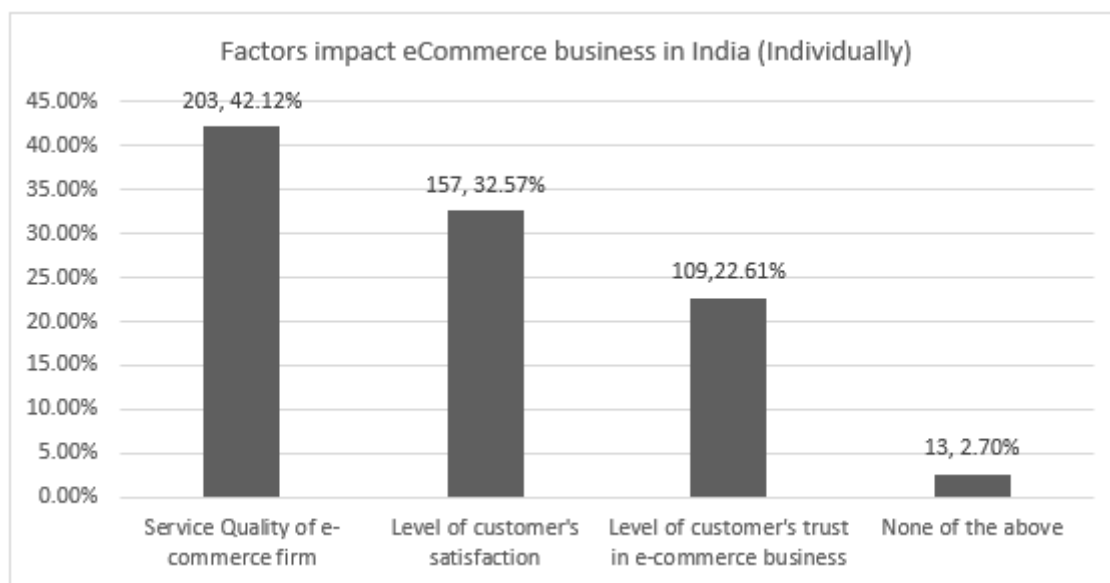


Figure 22: Factors that impact eCommerce business in India individually.

In graph 22, 42.12% of people with a total count of 203 have selected service quality alone as the most crucial factor for shopping online. While 32.57% of the total answers selected customer's satisfaction, 22.61% have selected customer's trust and the remaining almost 3% people have chosen none of the options.

The above question shows that service quality is the most crucial factor that a participant considers while shopping online. Followed by customer satisfaction and customer trust, which cannot be avoided. However, people also believe that combination of all the factors are important for eCommerce in India. Without customer satisfaction, and trust quality of service may not be achieved, likewise without trust and service quality customers may not be satisfied. And without service quality and satisfaction customer's trust may not be gained.

4.3. Impact of bad service quality on customers decision.

The 4th question aims to know the impact of bad service quality on a customer's decisions while doing online shopping. This question helps answer sub-question 1, where the main idea is to know if service quality impacts the overall eCommerce business.

| S# | Answer | % | Count |
|----|----------------------------|--------|-------|
| 1 | Yes | 42.07% | 130 |
| 2 | No | 29.13% | 90 |
| 3 | Had no such bad experience | 28.80% | 89 |
| | Total | 100% | 309 |

Table 16: Answers to survey question 4

In table 16, total respondents are the combination of people who selected either of the three options. 1.) Yes, 2.) No, and 3.) Had no such bad experience.

Figure 23 presents the division of the total number of participants based on their selected answer. The total number of respondents to question number 4 is 309. Out of 309 respondents, 130 (85%) of the total participants have answered Yes which means bad service quality impacted their decision while shopping online. While remaining participants have selected No or Had no such bad experience with the percentage share of approximately 29% each.

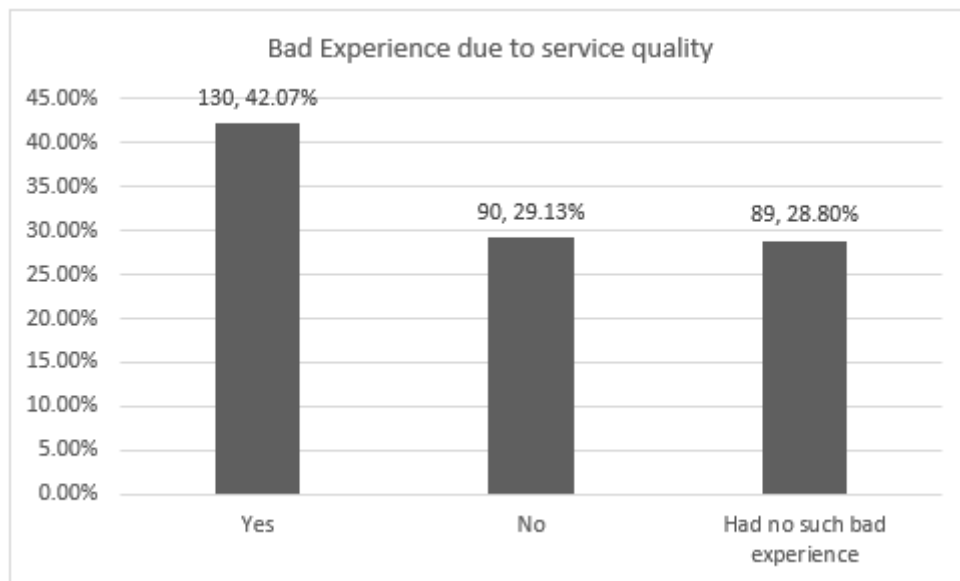


Figure 23: Bad experience due to service quality

The analysis of the data shows that the bad service quality does impact the customers decision while shopping online. This analysis explains the importance of service quality in

eCommerce shopping and suggests that bad service quality has a negative impact on the overall eCommerce business.

Also, while elaborating the impacts of bad service quality, participants have given examples of bad experiences. The participants who have explained the affects clearly stated that they did not shop again from the same eCommerce company and moved to another alternative.

4.4. Impact of customer's trust on eCommerce Business.

The 6th question was asked to users if their decisions of online shopping were affected by the low level of their trust on a web business. Aim of this question was to know the impact of a bad level of customer's trust on a customer's decisions. This question helps answer sub-question 3. Table number 17 and Figure number 24 explains the received data from question number 6.

Table 17 presents the collected answers from participants who have given their opinion on the question by selecting from the given answers. The table has numbers in count and in percentage that are further analysed below.

| S# | Answer | % | Count |
|----|----------------------------|--------|-------|
| 1 | Yes | 50.68% | 149 |
| 2 | No | 27.21% | 80 |
| 3 | Had no such bad experience | 22.11% | 65 |
| | Total | 100% | 294 |

Table 17: Answers to survey question 6

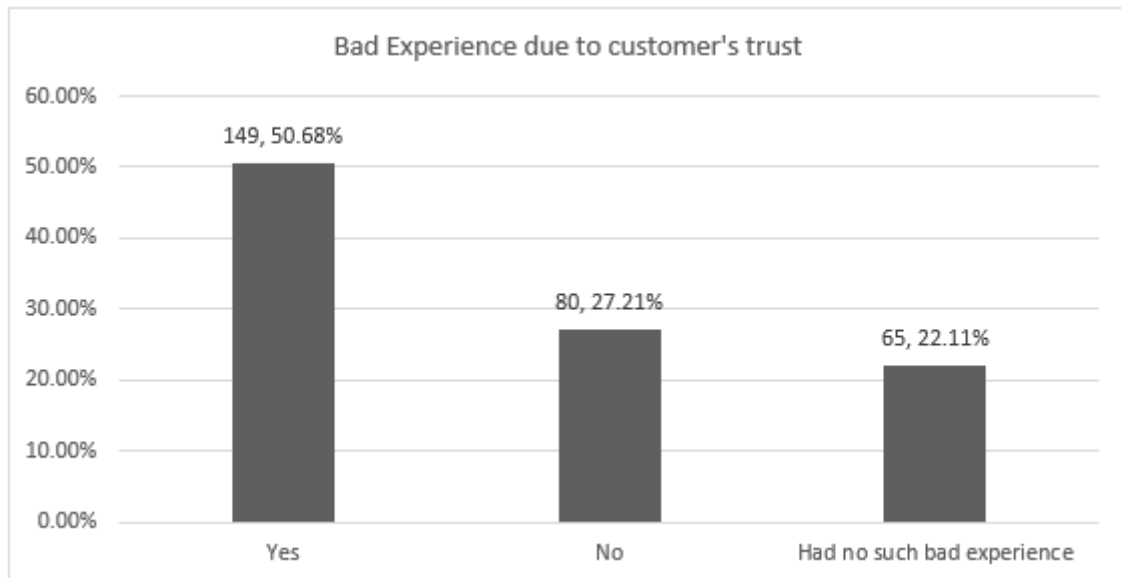


Figure 24: Bad experience due to Customer's Trust

In the figure 24, more than 50% of the participants selected Yes as their answer and supported the question that their decision was impacted by the bad experience due to the level of trust. 80 participants selected No, which means their decision was not impacted with the bad experience they had. However, 65 participants which is 22.11% said that they have not faced any such bad experience due to customer's trust.

As more than 50% of total participants have selected that their decision was impacted if they had a low level of trust in the eCommerce organisation. Which means that customer's trust is an important aspect when it comes to eCommerce business. Also, while analysing the descriptive responses of the question, people mentioned that in case of a bad experience due to customer's trust, they avoided making payment on the online portal and tried not to shop again from the same web portal.

4.5. Impact of customer's satisfaction on eCommerce Business.

Along with customer's trust and service quality the aims was to know if level of customer;s satisfaction impact their decisions during shopping online. Question number 8 helps answer sub-question 2.

Table number 18 and Figure number 25 explains the received data from question number 8. Table 18 presents the collected answers in count and in percentage.

| S# | Answer | % | Count |
|----|----------------------------|--------|-------|
| 1 | Yes | 53.82% | 155 |
| 2 | No | 26.74% | 77 |
| 3 | Had no such bad experience | 19.44% | 56 |
| | Total | 100% | 288 |

Table 18: Answers to survey question 8

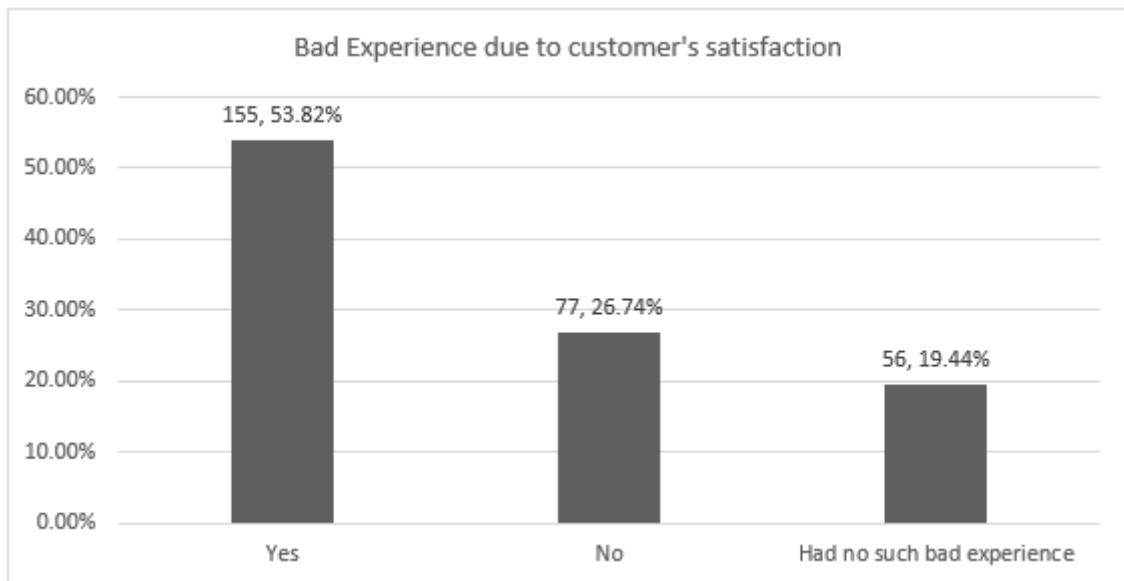


Figure 25: Bad Experience due to customer's satisfaction

Figure 25 is the graphical representation of the table 18 that shows the values of the participant's opinion. Where the total number of participants who have answered as Yes is 155 out of 288 total participants, which makes this 53.82% of the total participation. These participants agreed that in the instances of low level of satisfaction their decision was affected. On the other hand, 26.74% of the participants said that their decision was not impacted by the level of satisfaction by selecting the answer No. There are however, approximately 20% of participant who believes that they did not have any such bad experience and selected third answer which is Had no such bad experience

More than 53% of total participants have selected that their decision was impacted by the level of satisfaction received from the eCommerce organisation and considered customer's

satisfaction as an important aspect for eCommerce business. People who had bad customer's satisfaction have also stated that they never shopped online from the same web business again, and such experience had affected their purchase intentions.

4.6. The Factors that impact customer's satisfaction.

The aim of question 10 is to know the participant's perspective that according to a participant, what are the two most important factors that may impact the level of customer's satisfaction. This question helps find the results for sub-question 5, which is about the factors that impact the customer's satisfaction. Table number 19 and Figure number 26 explains the received data from question number 10.

Table 19 presents the collected answers from participants who have given their opinion on the question by selecting the given value. There were six values that a participant had to select the two most important factors that impact the customer's satisfaction. Along with 5 SERVQUAL factors (Reliability, Tangibility, Assurance, Empathy and Responsiveness), another option was also given to know if participants had any other factor that might impact the customer's satisfaction. The share of participation is shown in the percentage and as well as in the count.

| S# | Answer | % | Count |
|----|--|--------|-------|
| 1 | Reliability | 36.96% | 190 |
| 2 | Tangibility | 6.81% | 35 |
| 3 | Assurance | 22.96% | 118 |
| 4 | Empathy | 3.11% | 16 |
| 5 | Responsiveness | 21.40% | 110 |
| 6 | Others (like Ease of use, Mobile application, Customer Service etc.) | 8.75% | 45 |
| | Total | 100% | 514 |

Table 19: Answers to survey question 10

Figure 26 is the graphical representation of the table 19 that shows the divisions of the participant's opinion. A total number of participants have considered reliability the most critical factor for customer satisfaction with 190 selections, 36.95% of total responses. Tangibility was selected by 6.81% of participants, which is a number 35. Assurance was chosen 118 (22.96%) times. Empathy and responsiveness were selected by 16 (3.11%) and 110 (21.40%), respectively. However, more than 8% of participants also selected and stated other factors such as ease of use, mobile application, and customer support as important factors that impact customer satisfaction.

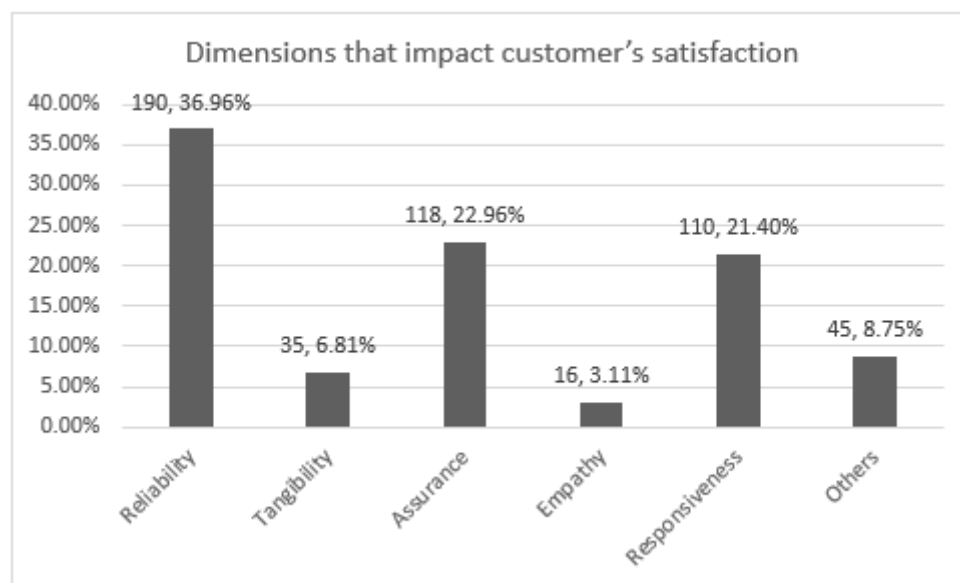


Figure 26: Dimensions that impact customer's satisfaction.

While analysing the responses, it was clearly seen that reliability and assurance are considered the most critical factors that might impact customer's satisfaction. However, percentage of responsiveness is just 2% below the assurance and can also be regarded as an essential factor for customer's satisfaction.

4.7. The Factors that impact customer's trust.

Question 11 aims to know the two most important factors that may impact the level of customer's trust. This question helps find the results for sub-question 6, which is about the factors that affect the customer's trust. Table number 21 and Figure number 27 explains the received data from question number 11.

| Description | % | Count |
|-------------------------------------|------|-------|
| Total Respondents | 100% | 365 |
| People did not respond the question | 30% | 108 |
| Total Responses Received | 70% | 257 |

Table 20: Total number of responses for question 11

Table 20 presents the share of participation where 257 people of a total of 365 people have responded to the question, which makes it 70% of the total participation. However, 108 participants have skipped this question which is 30% of the total participation which shows the participation in question remained low.

Table 21 presents the collected answers from participants who have given their opinion on the question by selecting the given answers. Like question number 10, there were six values that a participant had to choose the two most important factors that impact the customer's trust. The share of the participation is shown in the percentage and as well as in the count.

| S# | Answer | % | Count |
|----|--|--------|-------|
| 1 | Reliability | 32.92% | 159 |
| 2 | Tangibility | 10.14% | 49 |
| 3 | Assurance | 23.19% | 112 |
| 4 | Empathy | 7.04% | 34 |
| 5 | Responsiveness | 20.29% | 98 |
| 6 | Others (like Ease of use, Mobile application, Customer Service etc.) | 6.42% | 31 |
| | Total | 100% | 483 |

Table 21: Answers for survey question 11

The graphical representation of Table 21 is shown in figure 27 which shows the numbers of participant's opinion. As per the Table 21 and figure 27, 159 (32.92%) participants believe reliability as the most critical factor for customer satisfaction. Tangibility was selected by

10.14% of participants, which counts 49. Assurance was chosen 112 (23.19%) times. Empathy and responsiveness were selected by 34 (7.04%) and 98 (20.29%), respectively. However, more than 6% of participants also selected and stated other factors such as ease of use, mobile application, and customer support as essential factors that impact customer satisfaction.

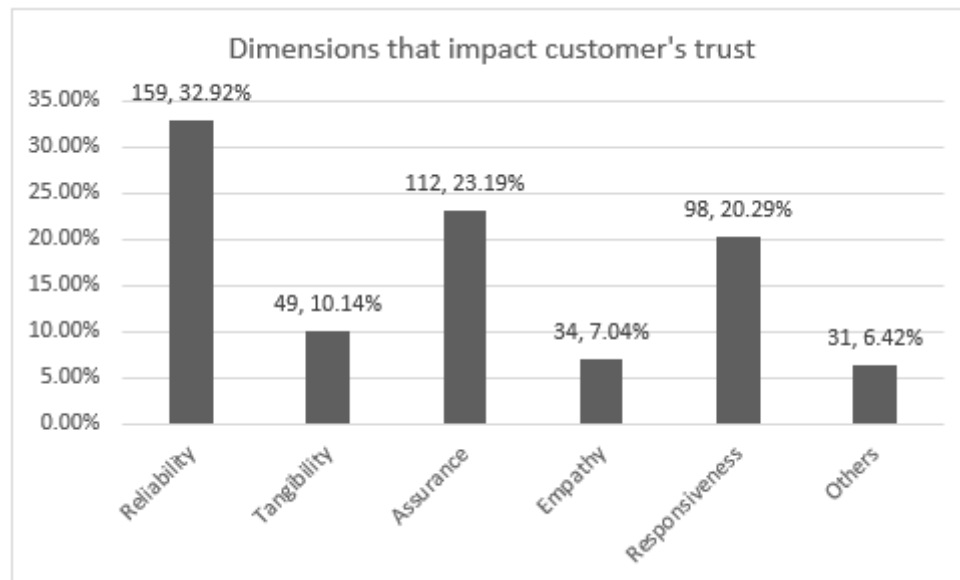


Figure 27: Dimensions that impact customer's trust.

While analysing the responses, it was clearly seen that reliability and assurance are considered the most critical factors that might impact customer's trust. However, selecting responsiveness is just 3% below the assurance and can also be considered an important factor for customer's trust.

4.8. The Factors that impact Service Quality.

The aim of question 12 is to find the answer for sub-question 4 through the collected responses from the survey. Table number 22 and Figure number 28 presents the received data from question number 12.

The given table 22 presents the collected answers from participants who have given their opinion on the question by selecting the given value. Like question number 10 and 11, there were six values that a participant had to choose the two most important factors that impact the

service quality. The share of the participation is shown in the percentage and as well as in the count.

| S# | Answer | % | Count |
|----|--|--------|-------|
| 1 | Reliability | 29.96% | 145 |
| 2 | Tangibility | 11.36% | 55 |
| 3 | Assurance | 21.28% | 103 |
| 4 | Empathy | 7.64% | 37 |
| 5 | Responsiveness | 22.73% | 110 |
| 6 | Others (like Ease of use, Mobile application, Customer Service etc.) | 7.02% | 34 |
| | Total | 100% | 484 |

Table 22: Answers for survey question 12

Figure 28 is the graphical representation of the above table 22 that shows the values of the participant's opinion. The total number of participants who have considered reliability again as the most crucial factor for service quality with 145 selections is 29.96% of total responses. Tangibility was selected by 11.36% of participants, which is in number is 55. Assurance was chosen 103 (21.28%) times. Empathy and responsiveness were chosen 37 (7.64%) and 110 (22.73%) times, respectively. However, more than 7% of participants also selected and stated other factors such as ease of use, mobile application and customer support as essential factors impacting service quality.

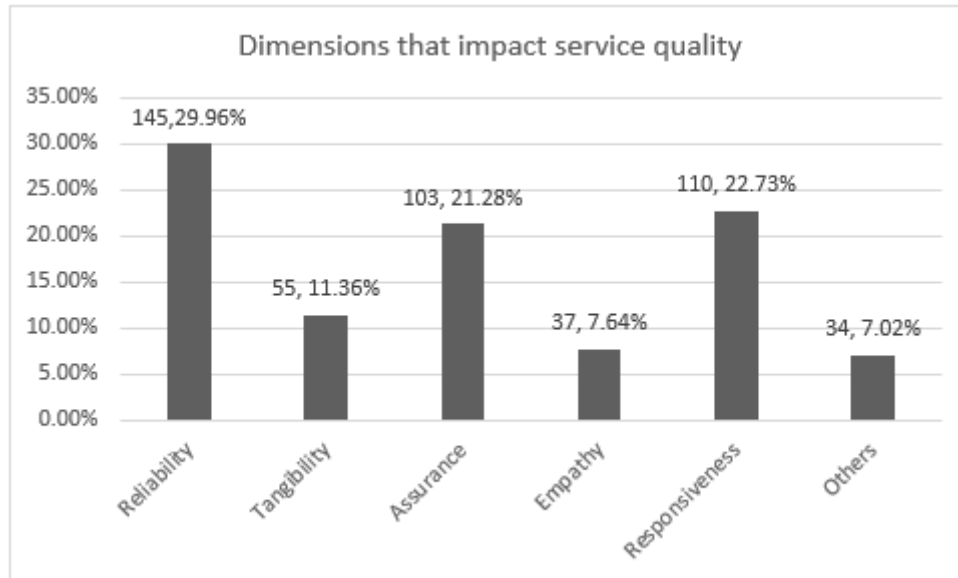


Figure 28: Dimensions that impact service quality.

While analysing the responses, it was seen that reliability and Responsiveness are considered the most critical factors that might impact Service Quality.

4.9. The factors that can improve Service Quality.

The aim of question 13 is to present the facts about the factor that may impact the overall service quality in an eCommerce business. This would also filter the data in more depth. Participants were asked to select one factor that is important to improve the service quality. Some of the participants have chosen more than one option, and, according to them, no any single option might justify the facts. This question helps find the results for sub-question four about the factors that impact the overall service quality. Table number 23 and Figure number 29 explains the received data from question number 13.

Table 23 presents the collected answers from participants who have given their opinion on the question by selecting the given value. There were six values where a participant had to choose 1 of the most critical factors that may improve the service quality if implemented positively in an organisation. Along with 5 SERVQUAL factors (Reliability, Tangibility, Assurance, Empathy and Responsiveness), another option was also given to know if participants believes that none of the above factors impacts the service quality. The share of the participation is shown in the percentage and as well as in the count.

| S# | Answer | % | Count |
|----|----------------|--------|-------|
| 1 | Reliability | 28.65% | 149 |
| 2 | Tangibility | 12.31% | 64 |
| 3 | Assurance | 24.42% | 127 |
| 4 | Empathy | 9.04% | 47 |
| 5 | Responsiveness | 22.88% | 119 |
| 6 | None of them | 2.69% | 14 |
| | Total | 100% | 520 |

Table 23: Answers for survey question 13

The graphical representation of Table 23 in figure 29 shows the values of the participant's opinion. The total number of participants who have considered reliability as the most crucial factor for service quality with 149 selections is 28.65% of total responses. Tangibility was selected by 12.31% of participants, which is in number is 64. Assurance was chosen 127 (24.42%) times. Empathy and responsiveness were chosen by 47 (9.04%) and 119 (22.88%) participants, respectively. However, there were more than 2% of participants also chosen none of the above option. Which means as per those 2.69% of participants none of the above factors can improve service quality in an eCommerce organisation.

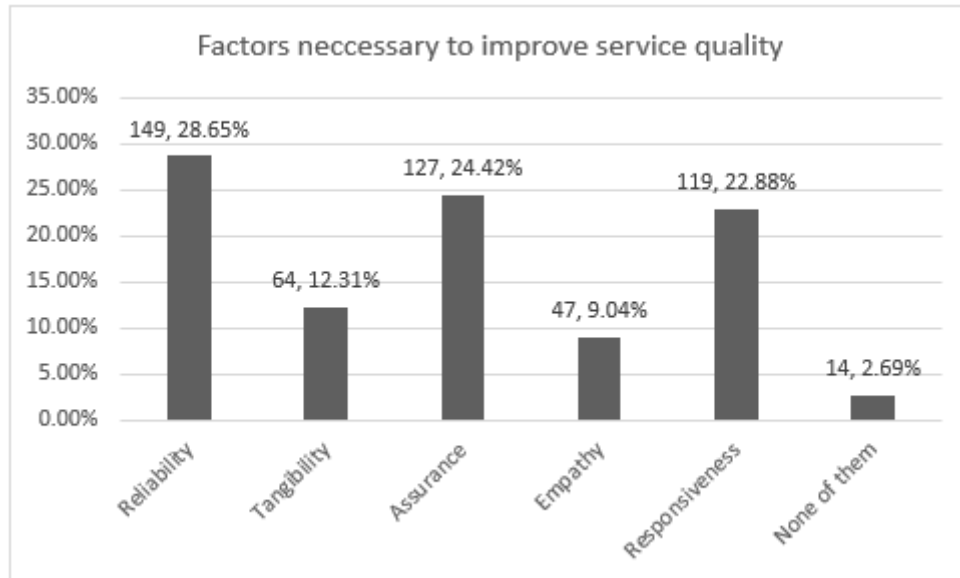


Figure 29: Factors necessary to improve service quality.

While analysing the responses, it was clearly seen that reliability is considered the most important factors that might impact Service Quality followed by assurance and responsiveness. Participants believe that the level of service quality can be improved if a reliable online business is provided to customers.

4.10. The Factors that can improve Customer's Satisfaction.

The aim of question 14 is to present the facts about the factor that may impact the customer's satisfaction in an eCommerce business. Participants were asked to select one factor that is important to improve the customer's satisfaction. This question helps find the results for sub-question five, which is about the factors that impact the customer's satisfaction. Table number 24 and Figure number 30 explains the received data from question number 14. The overall participation remained low for this question where 261 people responded to the question, and 104 people had skipped it.

The given table 24 presents the collected answers from participants who have given their opinion on the question by selecting the given value. Like the previous question, there were six answers where a participant had to select one most important factor that may improve customer satisfaction if implemented positively in an organisation along with Other option, which a participant may choose if participant believes that none of the above factor improve

the level of customer's satisfaction. Table 24 shows the share of participation percentage and as well as in the count.

| S# | Answer | % | Count |
|----|----------------|--------|-------|
| 1 | Reliability | 26.97% | 140 |
| 2 | Tangibility | 12.52% | 65 |
| 3 | Assurance | 24.66% | 128 |
| 4 | Empathy | 11.37% | 59 |
| 5 | Responsiveness | 21.97% | 114 |
| 6 | None of them | 2.50% | 13 |
| | Total | 100% | 519 |

Table 24: Answers for survey question 14

Figure 30 shows the values of the participant's opinion. The total number of participants who have considered reliability as the most important factor for customer satisfaction with 140 selections is 26.97% of total responses. Tangibility was selected by 12.52% of participants, which is in number is 65. Assurance was chosen 128 (24.66%) times. Empathy and responsiveness were chosen by 59 (11.37%) and 114 (21.97%) participants, respectively. However, there were more than 2% of participants also selected none of the options. As per this 2.50% of participants, none of the above factors can improve the customer's satisfaction in an eCommerce organisation.

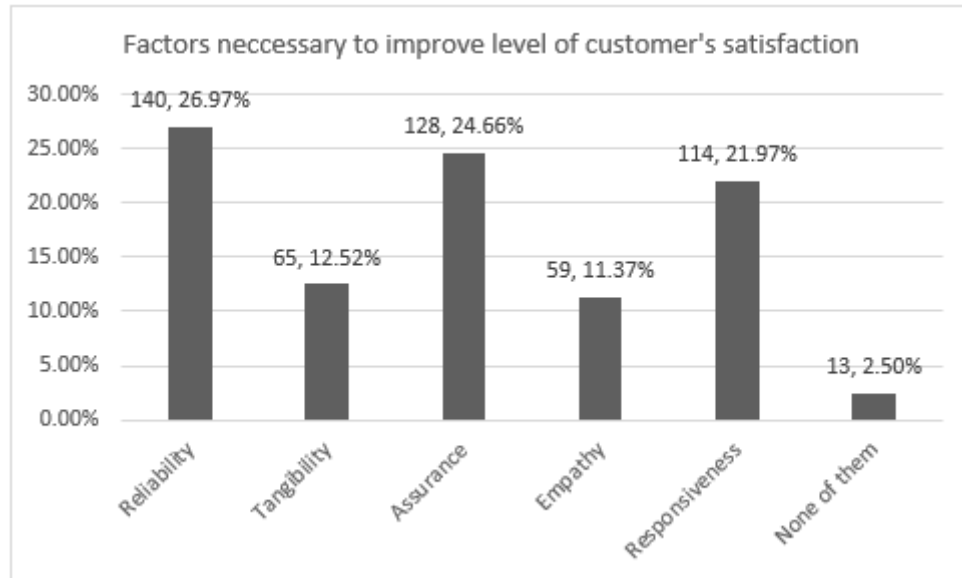


Figure 30: Factors necessary to improve the level of customer's satisfaction.

While analysing the responses, it was clearly seen that reliability is considered the most critical factor that might affect Customer's Satisfaction also. However, assurance and responsiveness also play an important role in the improvement of the level of customer's satisfaction when it comes to eCommerce business.

4.11. The Factors that can improve Customer's Trust.

The aim of question 15 is to present the facts about the factor that may impact the customer's trust in an eCommerce business. Table number 25 and Figure number 31 explains the received data from question number 15.

Table 25 presents the collected answers from participants who have given their opinion on the question by selecting the given answer. The share of the participation is given in the percentage and as well as in the count.

| S# | Answer | % | Count |
|----|----------------|--------|-------|
| 1 | Reliability | 27.54% | 141 |
| 2 | Tangibility | 11.14% | 58 |
| 3 | Assurance | 25.00% | 128 |
| 4 | Empathy | 11.72% | 60 |
| 5 | Responsiveness | 21.29% | 109 |
| 6 | None of them | 3.32% | 17 |
| | Total | 100% | 512 |

Table 25: Answers for survey question 15

Figure 31 shows the values of the participant's opinion. The total number of participants have considered reliability as the most critical factor for customer's trust with 141 selections, which is 27.54% of total responses. Tangibility was selected by 11.14% of participants, which is in number is 58. Assurance was chosen 128 (25.00%) times. Empathy and responsiveness were selected by 60 (11.72%) and 109 (21.29%) participants, respectively. However, there were more than 3% of participants also chosen none of the options. As per this 3.32% of participants, none of the above factors can improve the customer's trust in an eCommerce organisation.

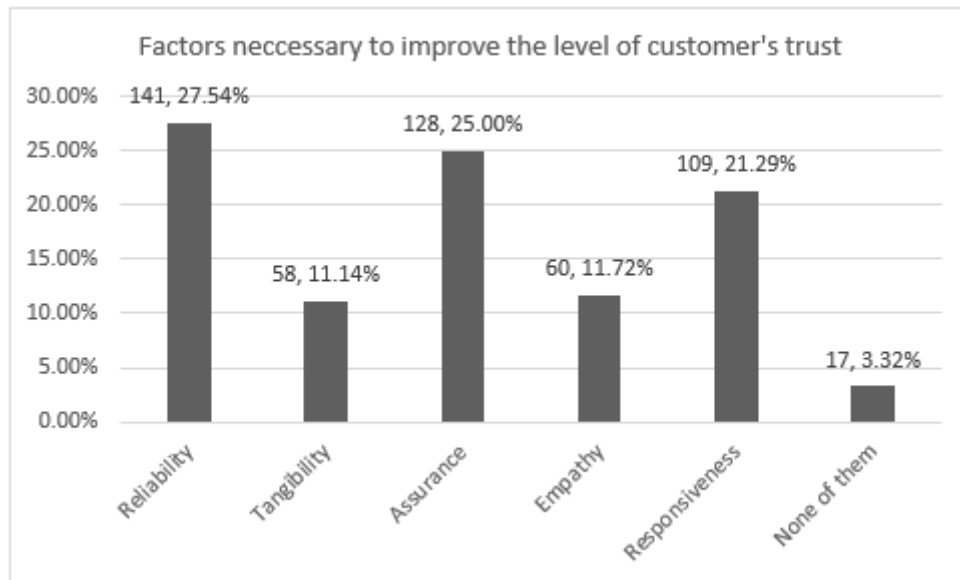


Figure 31: Factors necessary to improve the level of customer's trust.

While analysing the responses, it was clearly seen that reliability is considered the most critical that may improve the level of trust is eCommerce business.

4.12. The extent to which service quality, Customer's satisfaction, and Customer's Trust are important.

Question number 16,17, and 18 are created to know the participant's perspective about the importance of Service Quality, Customer's trust, and Customer's Satisfaction, respectively, in an eCommerce business.

In the three questions, participants were given options to select the extent of importance.

There are five options where participant must select one. First is 'To a great extent', which means the factor has the uttermost importance in an eCommerce business. Second is 'To a moderate extent' which means something below the great extent but still has a lot of importance. Third option is 'To some extent', which means that participants think the factor has some significance. Fourth and fifth options are 'To a small extent' and 'not at all' that suggest that the element has little or no impact on the eCommerce business.

Question 16 shall help answer sub-question 1, Question 17 shall help answer Sub-Question 3, and Question 18 shall help answer Sub-question 2 in the research.

Table 26 and Figure 32 below presents the received data from question number 16,17, and 18.

Table 26 presents the combined data the collected answers from questions 16,17 and 18. The number of answers received in question 16,17, and 18 are given in table 26 with the percentage of share and count.

| | Factors | Service Quality | | Customer's Trust | | Customer's Satisfaction | |
|----|----------------------|-----------------|-------|------------------|-------|-------------------------|-------|
| S# | Criteria | % | Count | % | Count | % | Count |
| 1 | To a great extent | 65.12% | 168 | 61.63% | 159 | 63.95% | 165 |
| 2 | To a moderate extent | 15.89% | 41 | 22.48% | 58 | 20.54% | 53 |
| 3 | To some extent | 11.63% | 30 | 10.47% | 27 | 7.36% | 19 |
| 4 | To a small extent | 4.65% | 12 | 2.33% | 6 | 4.26% | 11 |
| 5 | Not at all | 2.71% | 7 | 3.10% | 8 | 3.88% | 10 |
| | Total | 100% | 258 | 100% | 258 | 100% | 258 |

Table 26: Answers for survey question 16,17 and 18

Figure 32 presents the combined data received for question 16,17, and 18. The outcome of all three questions describes that the impact of all three factors, service quality, customer's satisfaction and customer's trust are critical for eCommerce business.

The selection share remained more than 60%, wherein in all questions, more than 60% of people said that the impact of these factors is to a great extent. Where for service quality, 62.12% (168) people think that service quality matters to a great extent selection number. 61.63% (159) participants selected 'to a great extent' for customer's satisfaction and 63.95% (165), participants selected to a great extent for customer's trust.

From 15-22% of people think that the impact of these factors is moderate on an eCommerce business. Where the impact was calculated 15.89% (41) for service quality, it remained 22.48% (58) and 20.54% (53) for customer's trust and customer's satisfaction, respectively.

The share of to some, small and no extent for service quality are 11.63% (30), 4.65% (12) and 2.71% (7). For customer's trust, these values changed slightly. To some extent, is it 10.47% which is 27 number selections, for small extent, six selections were made with the percentage of 2.33%, and for not at all the values were eight people with the share of 3.10%. However, values for customer satisfaction had a change where values for To a small extent were 19 with the share of 7.36%, To a small extent 11 with the share of 4.26% and Not at all remained at ten selections with the share of 3.88%.

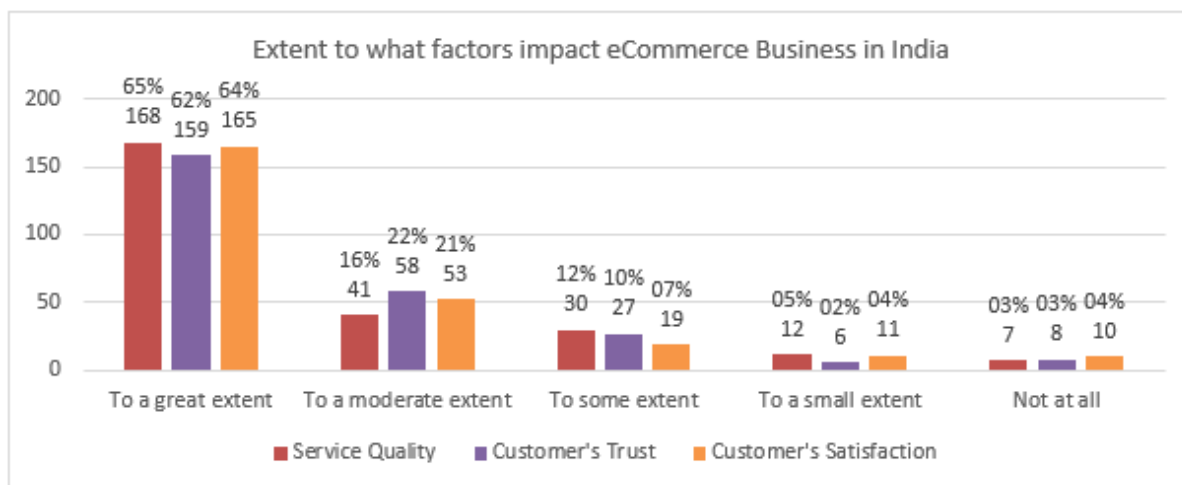


Figure 32: Extent to what factors impact eCommerce business in India.

With the above analysis, it can be said that service quality, customer's trust, and customer satisfaction are all three dependent variables that matter to a great extent in the Ecommerce business. Where in every variable, more than 60% of participants support the argument.

4.13. How often does a factor impact customers satisfaction?

Question number 19 aims to know how often the SERVQUAL Factors (Reliability, Tangibility, Assurance, Empathy and Responsiveness) impact customer satisfaction in an eCommerce business.

In the question, participants were given options to select the instances for each of the factors. The five instances to select one for each factor are Always, Often, Sometimes, Never, and I don't know. Selecting 'Always' means that the factor impacts the customer's satisfaction every time a participant shops online. 'Often' means that the factor matters on frequent occasions, 'Sometimes' means that a few times the factor matters, 'Never' means that the

factor does not impact the customers' satisfaction. 'I don't know' the option is given if a participant is confused or does not have knowledge about the topic. This question shall help understand the answers to sub-question five related to customer satisfaction and factors that impact customer satisfaction.

Below given tables 27 and Figures 33 explains the received data from question number 19.

The participation in question remained low compared to other questions. People have selected a choice for reliability 244 times with 67% participation, selection of choice for tangibility is 197 times with 54% people. For assurance, the numbers are 191 (52%), and for empathy and responsiveness, the contribution is 50% and 49%, respectively. The numbers are calculated based on 365 participants who were eligible for this survey

This question is asked to participants to know and analyse what factors (Reliability, Tangibility, Assurance, Empathy & Responsiveness) are essential for Customer's Satisfaction. And how often do they impact their customer's satisfaction while an online purchase. This question helps answer sub-question 5, where the researcher is trying to find the factors that may impact customer satisfaction.

| # | Factors | Always | | Often | | Sometimes | | Never | | I don't know | | Total |
|---|--------------------|--------|-------|--------|-------|-----------|-------|-------|-------|--------------|-------|-------|
| | | % | Count | % | Count | % | Count | % | Count | % | Count | Count |
| 1 | Reliability | 73.36% | 179 | 15.57% | 38 | 9.02% | 22 | 0.82% | 2 | 1.23% | 3 | 244 |
| 2 | Tangibility | 41.12% | 81 | 31.98% | 63 | 17.77% | 35 | 3.55% | 7 | 5.58% | 11 | 197 |
| 3 | Assurance | 61.26% | 117 | 20.94% | 40 | 10.47% | 20 | 4.71% | 9 | 2.62% | 5 | 191 |
| 4 | Empathy | 34.43% | 63 | 31.15% | 57 | 25.68% | 47 | 6.01% | 11 | 2.73% | 5 | 183 |
| 5 | Responsive ness | 68.33% | 123 | 12.22% | 22 | 13.89% | 25 | 1.11% | 2 | 4.44% | 8 | 180 |

Table 27: Answers for survey question 19

In table 28, there are five categories (Always, Often, Sometimes, Never, and I do not know) of participant choices to select for every factor. The data is presented in counts and their contribution in percentage to the total responses for the factor. Column total has the total number of respondents who answered the question.

Graph 33 presents the data received from participants.

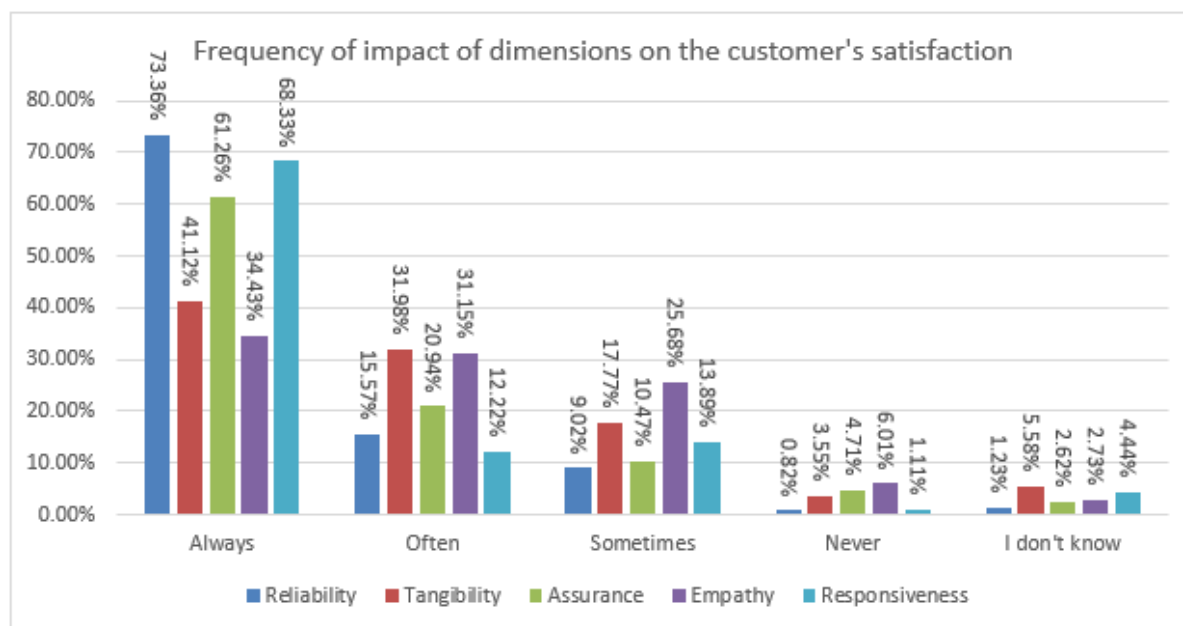


Figure 33: Frequency of impact of dimensions on the customer's satisfaction.

In the collected data, 73.36% (179) of people have selected reliability as a factor that always impacts the customer's satisfaction. In comparison, 15.57% of people with 38 participants have chosen often as a choice. 9.02% of people think reliability impacts customers satisfaction only sometimes. However, 0.82% (2) participants have said that reliability does not impact customer satisfaction. And, remaining three people which is 1.23%, did not know the answer.

81 participants, which is 41.12% of the total number of participants who responded to this factor, have considered tangibility as the main factor that always impacts customer satisfaction. While 63 (31.98%) participants think tangibility not always but often affects the customer's satisfaction and other 35(17.66%), 7(3.55%), and 11(5.58%) participants have selected 'sometimes', 'never', and 'I don't know' options, respectively.

117 Participants said that assurance always impacts customer's satisfaction, and 63 participants said it often affects customer's satisfaction. The percentage for both participants is 61.26% and 20.94%, respectively. However, 10.47% of participants made their choice as 'sometimes'. The remaining 4.71% and 2.62%, which are 9 & 5 in numbers, selected 'never' and 'I Don't know' as their choices.

While selecting categories for empathy, 63 (34.43%), participants selected 'always', which means that these participants think that empathy always impacts customer's satisfaction. 57 (25.68%) participants selected 'often', while 47(25.68%) participants chosen 'sometimes', 'never' was selected by 11(6.01%) participants, and the remaining 2.73% (5) chose 'I don't know'.

Responsiveness is always an essential aspect of customer's satisfaction. As per the analysis, 68.33% (123) of participants selected the option 'Always'. While 'Often' by 22(12.22%), 'sometimes' by 25(13.89), 'never' by 2(1.11%), and 'I don't know' was selected by 8(4.44%) of participants.

This analysis advises that reliability is the major factor followed by assurance and empathy that always impact customer satisfaction.

4.14. Factors matter the most in service quality.

Aim of the question 20 in the survey is to know how often the dimensions impact overall service quality.

In question 19 & 20, the criteria are the same, where the participant has to select from the five choices (Always, Often, Sometimes, Never, and I don't know). This question shall help understand the answers to sub-question four related to service quality and dimensions that impact service quality.

The participation in this question also remained low. Only 239 responses were given for reliability, 184 to tangibility, 180 to assurance, 178 to empathy, and 181 to responsiveness out of 365 participants eligible for this survey.

Table number 28 and Figure number 34 explains the received data from question number 20.

| # | Factors | Always | | Often | | Sometimes | | Never | | I don't know | | Total |
|---|----------------|--------|-------|--------|-------|-----------|-------|-------|-------|--------------|-------|-------|
| | | % | Count | % | Count | % | Count | % | Count | % | Count | Count |
| 1 | Reliability | 70.29% | 168 | 16.32% | 39 | 10.04% | 24 | 1.26% | 3 | 2.09% | 5 | 239 |
| 2 | Tangibility | 46.20% | 85 | 27.17% | 50 | 19.02% | 35 | 2.72% | 5 | 4.89% | 9 | 184 |
| 3 | Assurance | 61.11% | 110 | 15.56% | 28 | 15.00% | 27 | 5.00% | 9 | 3.33% | 6 | 180 |
| 4 | Empathy | 42.13% | 75 | 28.09% | 50 | 21.91% | 39 | 3.93% | 7 | 3.93% | 7 | 178 |
| 5 | Responsiveness | 62.43% | 113 | 17.13% | 31 | 16.02% | 29 | 2.76% | 5 | 1.66% | 3 | 181 |

Table 28: Answers for survey question 20

In table 29, there are five categories (Always, Often, Sometimes, Never, and I do not know) where participant can select one of them for every dimension. The data is presented in counts and their contribution in percentage to the total responses for the factor. Column total has the total number of respondents who answered the question.

The below-given graph 34 represents the data received from participants.

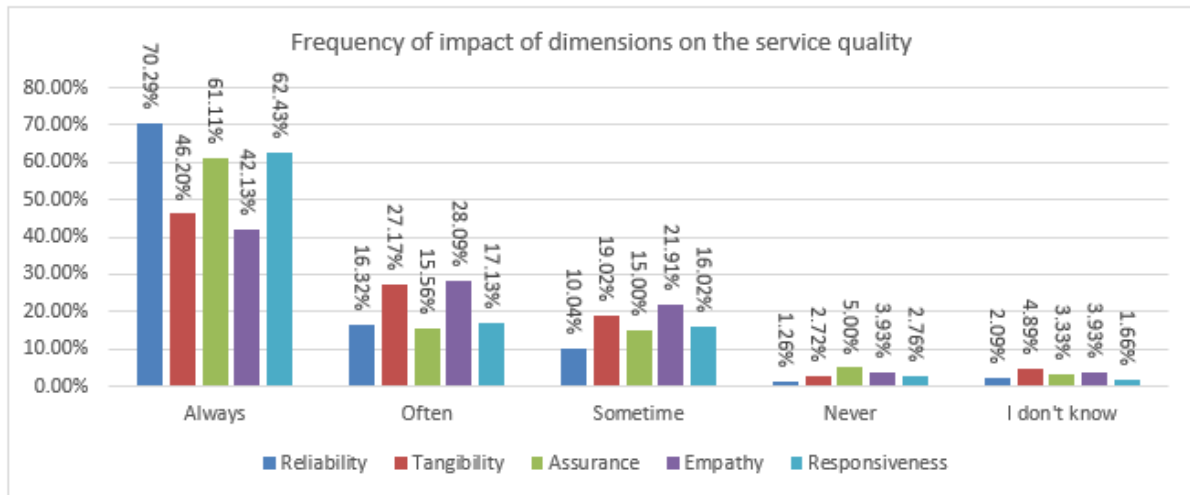


Figure 34: Frequency of impact of dimensions on the service quality.

While selecting the dimensions that impacts service quality the most, a maximum number of respondents chosen reliability as the primary dimension that always affects the service quality. In the collected data, 70.29% (168) people have selected reliability as a dimension that always impacts the service quality. In comparison, 16.32% of participants think that reliability often affects service quality. At the same time, the other 13% of participants selected sometimes (10%), Never (1%) and I don't know (2%), respectively.

For tangibility, the total number of participants who responded to these criteria was 184. Out of that, 46.20% (85) think that tangibility always impacts service quality, 27.17% (50) participants think tangibility often impacts service quality. While 35 (19%) participants think tangibility sometimes affects service quality. The remaining 2.72% and 4.89% of participants believe tangibility does not affect service quality or do not know the answers.

110 Participants said that assurance always impacts service quality, and 28 participants said it often affects service quality. The percentage for both participants is 61.11% and 15.56%, respectively. However, 15% of participants made their choice as 'sometimes'. The remaining 5% and 3.33% selected 'never' and 'I Don't know' as their choices.

While selecting their preferred choice, approximately 42% & 28% of participants chose that empathy always and often impacts service quality. The remaining participants selected sometimes (21.91%), never (3.93%), and I don't know (3.93%) as their choices.

The last option was responsiveness, where a maximum number of people think that responsiveness always impacts service quality with a share of 62.43%. The choice for often remained to 17% (approximately). At the same time, 16% (approximately) participants selected ‘sometimes’ as their choice. The remaining 2.76% and 1.66% of participants selected ‘never’ and ‘I don’t know’, respectively.

After the analysis of question 20, the results suggest that a maximum number of people think that reliability, assurance, and responsiveness are the dimensions that always or often impact the service quality and becomes the important dimensions for service quality when it comes to eCommerce business.

4.15. Factors matter the most to customer’s trust.

Question 21 aims to explore the dimensions that impact the level of customer’s trust the most. The criteria for this question also remained the same as question 19 and 20. This question shall help understand the answers to sub-question eight related to customer’s trust. Table number 29 and Figure number 35 explains the received data from question number 21.

| # | Factors | Always | | Often | | Sometimes | | Never | | I don't know | | Total |
|---|----------------|--------|-------|--------|-------|-----------|-------|-------|-------|--------------|-------|-------|
| | | % | Count | % | Count | % | Count | % | Count | % | Count | Count |
| 1 | Reliability | 70.69% | 164 | 15.95% | 37 | 9.48% | 22 | 3.02% | 7 | 0.86% | 2 | 232 |
| 2 | Tangibility | 44.00% | 77 | 33.14% | 58 | 16.57% | 29 | 4.57% | 8 | 1.71% | 3 | 175 |
| 3 | Assurance | 63.95% | 110 | 18.60% | 32 | 13.37% | 23 | 2.33% | 4 | 1.74% | 3 | 172 |
| 4 | Empathy | 40.00% | 68 | 29.41% | 50 | 25.29% | 43 | 2.94% | 5 | 2.35% | 4 | 170 |
| 5 | Responsiveness | 64.67% | 108 | 14.97% | 25 | 16.17% | 27 | 3.59% | 6 | 0.60% | 1 | 167 |

Table 29: Answers for survey question 21

Table 29 presents the data of participants choices for a dimension in counts percentage. Last column has the total number of respondents who answered the question.

When it comes to participation in this question, the numbers seem low when compared to other questions. Only 232 responses were given for reliability, 175 to tangibility, 172 to assurance, 170 to empathy, and 167 to responsiveness out of 365 participants who were eligible for this survey.

Figure 35 presents the data received from participants.

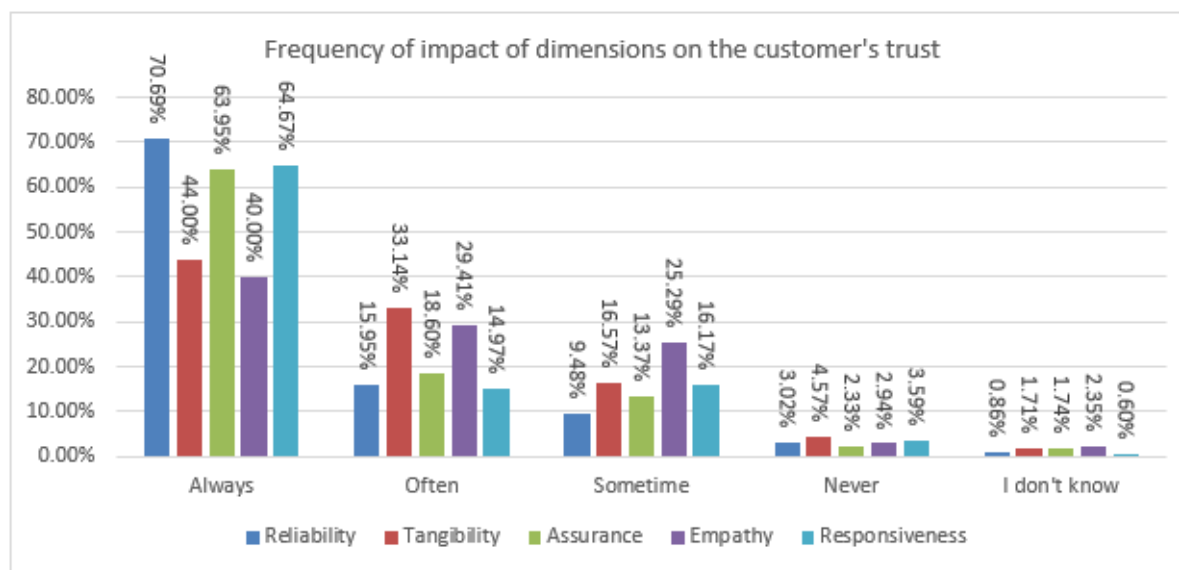


Figure 35: Frequency of impact of dimensions on the customer's trust.

Reliability is considered a dimension that always impacts the customer's trust and is selected by 164 participants out of 232 participants, which is almost 71% of total participation. However, selection on other options remained low to (often) 16%, (sometimes) 9%, (never) 3% and (I don't know) 0.86%

For tangibility, the total number of participants who responded to these criteria was 175. 44.00% (77) participants think tangibility always impacts service quality, and 33.14% (58) participants think tangibility often impacts it. While 29 (16.57%) participants think tangibility sometimes affects the service quality. Other 4.57% (8) and 1.71% (3) participants either think that tangibility does not affect the service quality, or they did not know the answers.

110 Participants said that assurance always impacts customers, and 32 participants said it often affects it. However, 23 participants selected sometimes as a choice. The remaining 2.33% and 1.74% selected 'never' and 'I Don't know' as their choices.

While selecting their preferred choice for empathy, 40% & 29% of participants, which in numbers is 68 & 50, selected that empathy always and often impacts customer's trust. The remaining participants selected sometimes (25.29%), never (2.94%), and I don't know (2.35%) as their choices.

In responsiveness, 62.43% participants think that responsiveness always impacts customer's trust. 15% of participants kept their choice as often. At the same time, 16% (approximately) participants selected 'sometimes' as their choice. The remaining 3.59% and 0.60% of participants selected never, and I don't know their choice.

After the analysis of question 21, the results suggest that a maximum number of people think that reliability, assurance, and responsiveness are the dimensions that always or often impacts the customer's trust.

4.16. Conclusion

After the data analysis, the researcher could reach the conclusion that all three factors (service quality, customer's satisfaction, and customer's trust) impact the eCommerce business in India. All three factors are considered important for the web business where service quality and customer's satisfaction remained the choice of a maximum number of participants, customer's trust might impact lower than the other two factors. Also, reliability and responsiveness are the dimensions that affect service quality and customer's satisfaction the most. However, for customer's trust, the most important dimensions are reliability and assurance.

5. Discussion

This chapter presents the discussion on the findings received from the literature reviews and survey responses where the quantitative method and analysis are used to find out the results. The researcher aims to present its interpretations of the findings of this study. The discussion also explains the relationship between dependent and independent variables of the modified SERVQUAL model. The finding of the literature review is discussed in section 5.1. followed by the discussion of findings on Hypotheses in section 5.2., In section 5.3. the limitations of this research are discussed, and finally, the conclusion of this discussion is given in 5.4.

5.1. Descriptive analysis.

This section presents the role of literature review to answer the research questions. The interconnection between Literature Review and Sub Questions are shown below, given in table 31.

| Literature Review Section | Sub Question |
|---------------------------|--|
| 2.4.3. | (RQ1): Does overall service quality impacts e-commerce business in India? |
| 2.4.4. | (RQ2): Does customer satisfaction impact e-commerce business in India? |
| 2.4.5. | (RQ3): Does customer trust impact e-commerce business in India? |
| 2.4.3. | (RQ4): What Service Quality dimensions affect the Service Quality Most? |
| 2.4.4. | (RQ5): What Service Quality dimensions affect Customer Satisfaction Most? |
| 2.4.5. | (RQ6): What Service Quality dimensions affect the Customer's Trust Most? |

Table 30: Link between literature review section and sub-question

Table 32 represents the findings for the sub-questions from the literature review. The first column represents the literature review sections, which links to the sub-questions given in the next column.

| Sub-Question | Literature Review Findings | Survey Data Analysis |
|--------------|----------------------------|---|
| RQ1 | Yes | Yes |
| RQ2 | Yes | Yes |
| RQ3 | Yes | Yes, however, the options were selected by the least of all three options |
| RQ4 | All Factors | Reliability and responsiveness |
| RQ5 | Responsiveness | Reliability and responsiveness |
| RQ6 | Assurance | Reliability and assurance |

Table 31: Literature review & data findings for sub-questions

5.1.1. Impacts of service quality on eCommerce business in India.

eCommerce is becoming a need for people in the modern era. The growth of eCommerce is immense in the previous years. Along with the growth in the eCommerce business, participants' expectations are also increasing day by day, where consumers expect the best service quality from the business. In some previous studies, the researcher defined the importance of service quality in the eCommerce business. Mummalaneni et al. (2009) suggested that service quality prompt customers purchase more than once from one seller. In another research by Zhang et al. (2011), customer's repurchase intentions are influenced by service quality provided by the business during previous purchase. Also, the survey conducted for this study suggests that service quality is an important factor for eCommerce. In survey question 3,4, and 16 majorities of participants believed that service quality is an important factor for the eCommerce business in India.

5.1.2. Impacts of customer's satisfaction on eCommerce business in India.

As per the literature and previous studies, customer satisfaction from received service or product is a deciding factor for customer retention in an eCommerce business.

A satisfied customer prefers to shop from the same online store repeatedly due to gained belief of satisfaction by the customer. Fuentes and Blasco et al. (2010) find customer satisfaction a crucial factor in profitability and customer retention in a business. As per a study by Sanyala and Hisham (2019), 40% of eCommerce business revenue comes from

returning customers. Gurviez & Korchia (2013) define customer's satisfaction as mouth-to-mouth marketing, leading to positive or negative effects on the eCommerce business. The participants in the survey also support the fact that customer's satisfaction is a critical factor that impacts the eCommerce business in India. For example, in question 3, 8, and 18, participants selected customer's satisfaction as the crucial factor after service quality for eCommerce business.

5.1.3. Impacts of customer's trust on eCommerce business in India.

Trust is a base of any foundation, whether a human's relationship or a business and customers relationship. And it becomes more critical in an environment like eCommerce, where the communication between a buyer and seller happens virtually. The only trust makes a participant believe that the business is reliable enough to complete a transaction online. Reichheld and Scheffer (2000) stated that organizations must first gain their trust to retain customers in the business. Researchers like Yousafzai et al. (2010) commented that lack of trust is critical for not buying products online from eCommerce websites. Grabner-Kraeuter (2002) found in their analysis that trust is a necessary element for long-term relationships between different parties that positively or negatively impact the eCommerce business. The data received from the survey questions 3, 6, and 17 suggest that people support the fact that trust is an essential factor for an eCommerce business. Still, between the three options, trust was considered necessary by the least. However, the selection was made by a fair number of people, and the role of trust cannot be avoided.

5.1.4. Dimensions that affect service quality the most

As per the SERVQUAL model, all the dimensions are equally important for service quality in a business. This research aims to find the most important factors for service quality in an eCommerce business. The environment for a normal business and eCommerce business is completely different.

Bentum et al. (2020) conducted a study on 567 participants, with 22 items and 5 Likert to know the importance of reliability in service quality. As a result, reliability stands as the most critical factor for the business with 0.907 composite reliability.

However, the result generated from the data collected from the survey suggests that participants also selected responsiveness as the second choice after reliability. For example, in questions 12,13 and 20, respondents selected reliability as the most important dimension

for service quality and responsiveness as the second choice.

5.1.5. Dimensions that affect customer's satisfaction the most

Customer retention is a very critical factor that decides the business profitability of loss. A satisfied customer always prefers to stay with the business. A customer should be provided with a timely, quick and accurate response to gain the level of satisfaction (Kotler & Clarke, 2000). This study also defined satisfaction as a condition or a state that a participant feels after fulfilling his/her expectations through a timely response. Nguyen and Nagase (2019) conducted a study to determine the relationship between service quality and patient satisfaction. For this study, they analyzed data received from 516 patients, and through structured modelling, they observed a positive relationship between responsiveness and patient satisfaction.

However, in the survey responses from questions 10,14 & 19, respondents selected reliability as the most important factor for customer's satisfaction. The other choices remained as assurance and responsiveness with different marginal percentage.

5.1.6. Dimensions that affect customer's trust the most

The diversity of features and trustworthy information provided to customers generates a feeling of assurance from the organization to its customers, directly impacting the customer's trust (Shanka, 2012). As per Pakurar et al. (2019), assurance is the ability of employees and the level of their knowledge to inspire trust and confidence amongst other employees.

In the survey responses collected from survey questions, 11,15 & 21 respondents selected assurance the most after reliability. Reliability again was considered the most important factor for customer's trust, but assurance was selected as the second-most by the participants.

5.1.7. Other important findings.

While analysing the data received from participants, it was noticed that along with the existing SERVQUAL dimensions. People also give importance to other dimensions like ease of use, customer service, website design, delivery services, etc. A portion of total participation thinks that the dimensions should be different for eCommerce than the normal business. Also, it is observed that Reliability is the dimension that impacts all three factors.

5.2. Discussion on Hypotheses

In this subsection discussion on hypotheses is presented. For the analysis of hypotheses, data from survey and literature is used.

| Hypotheses | Results from literature review | The result from data analysis |
|------------|--------------------------------|-------------------------------|
| H1 | TRUE | TRUE |
| H2 | TRUE | TRUE |
| H3 | TRUE | TRUE |
| H4 | TRUE | TRUE |
| H5 | TRUE | TRUE |
| H6 | TRUE | TRUE |
| H7 | TRUE | TRUE |
| H8 | TRUE | TRUE |
| H9 | TRUE | TRUE |
| H10 | TRUE | TRUE |
| H11 | TRUE | TRUE |
| H12 | TRUE | TRUE |
| H13 | TRUE | TRUE |
| H14 | TRUE | NEUTRAL |
| H15 | TRUE | TRUE |
| H16 | TRUE | NEUTRAL |
| H17 | TRUE | TRUE |
| H18 | TRUE | TRUE |

Table 32: Hypotheses results through literature review and survey data

H1: There is a relationship between service quality and e-commerce business

From the received data in the survey and literature review, it can be said that service quality

positively impacts the eCommerce business. Better service quality helps to increase participants purchase intentions. As per Mummаланeni et al. (2009), service quality influence customers to purchase more than once from an online seller. In another research by Zhang et al. (2011), customers' repurchase intentions are influenced by service quality provided by the business during previous purchase. Also, the data received in survey question 3 and 4 suggest the same in question 3, 4 & 16 maximum number of total responses selected service quality as the main aspect that impacts eCommerce business. In question 3, out of 483 selections, 203, which is 42.12% of total responses, have selected that service quality impacts the eCommerce business. In question 4 where participants have been asked if bad service quality has impacted their purchasing decisions while shopping online. Out of 309 responses, 130 participants, which is approximately 42% of total participations, have responded as yes. Also, while doing the descriptive analysis, a maximum of people have said that they did not shop online after having a bad service quality. In question number 16, maximum participants have selected that service quality impacts eCommerce to a great extent. Out of 268, only seven participants said that service quality does not impact eCommerce; however, 158 have selected to a great extent.

After analysing the above data and literature, H1 stands true that service quality and eCommerce business have a relationship.

H2: There is a relationship between customer satisfaction and e-commerce business

Customer satisfaction is one of the key factors in eCommerce business suggested by survey responses and literature reviews. As per Gurviez & Korchia (2003), Customer retention or a repeat buyer indicates that the customer is happy with the product and service. He/she may convey the experience to other people, which will increase mouth-to-mouth marketing That leads to indirect or direct financial benefits (Sabri & Zakaria, 2015). Companies' success and long-term competitiveness can be measured by the level of customer satisfaction with the product or service it receives. (Hennig-Thurau & Klee, 1997).

The data received from an online survey suggests that customer satisfaction is the key factors that impact eCommerce business.

In question 3, out of 483 selections, 157, which is 32.57%% of total responses, have selected that customer satisfaction impacts the eCommerce business. While in question 8, 27% (approximately) have selected yes and indicates that customer does not prefer to shop online

from the store, which is not effective in customer satisfaction. Also, in question 18, maximum participants have selected that service quality impacts eCommerce to a great extent. Out of 258, only 10 participants said that service quality does not impact eCommerce; however, 165 have selected to a great extent.

After analysing the above data and literature, H2 stands true that customers satisfaction and eCommerce business has a relationship.

H3: There is a relationship between customers trust and e-commerce business

Reichheld and Schefter (2000) present that gaining customers trust is the most important factor to retain a customer in an online business. Also, Grabner-Kraeuter (2002) commented that lack of trust is critical for not buying products online from eCommerce websites. Results generated from the data analysis received from an online survey suggest a positive relationship between customer's trust and eCommerce business. In question 3, out of 483 selections, the selection of customer's trust as a factor that impacts eCommerce remains the lowest but contributed 22.61% of participants, 109 participants. In question 6, 51% of people said yes, customers trust impacted their shopping decision, and in question 17, only eight people denied the impact; however, 250 out of 258 total have supported the fact.

After analysing the above data and literature, H3 stands true that customers trust and eCommerce business have a relationship.

H4: There is a relationship between reliability and service quality

As per the data and literature review collected for the research, reliability is the most important factor for service quality. (Kotler & Keller, 2009) stated that reliability is the first step towards better service quality. Without reliability, a service would remain ordinary. The data collected in question 12,13, and 20 supports the Hypotheses where data shows the prominence of reliability over service quality.

While analysing survey question 12, reliability was considered the most important factor for service quality. In question 13 and 20 also, reliability was considered the most important factor that impacts service quality.

In the data received from literature reviews and online survey, it is concluded that there is a relationship between reliability and service quality.

H5: There is a relationship between reliability and customer satisfaction

Bentum et al. (2020) conducted a study on 567 participants, with 22 items and 5 Likert to know the importance of reliability in eCommerce. As a result, reliability stands as the most critical factor for customer satisfaction with 0.907 composite reliability.

The data collected through questions 10, 14, and 19 also suggests that reliability has a positive impact on customer satisfaction, where maximum people have selected reliability as the main choice when asked about the factors that may impact or improve customer satisfaction.

H6: There is a relationship between reliability and customer's trust

Trusting a business becomes more important when it comes to eCommerce business. In a virtual environment or eCommerce business, it becomes more important to make participants trust the organization, said Snow et al. (2000). Vakulenko et al. (2019) explain that the overall reliability of a website is a major factor that wins customers trust.

The data collected through questions 11, 15, and 21 also suggests that reliability and customers trust have a positive relationship where a reliable website or online business positively impacts the level of trust of a customer.

H7: There is a relationship between assurance and service quality

Assurance is a factor of service quality that the organization sometimes neglects, but it's important to impact buyers' intentions (Palese and Usai, 2018). The analysis is done in the given literature also stands true in the data analysis collected through online surveys.

Questions number 12,13 & 20 were asked participants to find if assurance has any relation with service quality and how much assurance impacts service quality. In the analysis, it was concluded that the impact is low in comparison with reliability and responsiveness. Still, there is surely a relationship between assurance and service quality where better assurance improves the level of service quality in an eCommerce business.

H8: There is a relationship between assurance and customer's satisfaction

In an environment where physical communication is not possible, everything is based on the

level of accurate information and assurance. Twum and Peprah (2020) stated that providing correct and relevant information to the client in the eCommerce business enhances the level of customers satisfaction.

Analysis of the data gathered from questions 10, 14, 19 in the survey suggests that participants understand the importance of assurance in the customer's satisfaction and selected assurance the 3rd most after reliability and assurance. And the data shows a positive relationship between assurance and customers satisfaction, which proves the Hypotheses true.

H9: There is a relationship between assurance and customer's trust.

In the eCommerce business model, trust is the base to create any foundation between customer and company. As per Shanka (2012), assurance gives the customer a feeling of trust in the website if the website gives accurate information. Analysis of the data gathered from questions 11, 15 and 21 in the survey suggest that customer's trust is based on the assurance given by the eCommerce company. The choice of assurance while asking questions about factors that impact customers' trust remained between 20% to 30%, making it an ideal factor to impact customer's trust, which proves the Hypotheses true.

H10: There is a relationship between responsiveness and service quality

Responsiveness can be considered the person's will to resolve customer issues and queries Vaddadi et al. (2018). As per Calisir et al. (2014), it is one of the critical factors of service quality and for overall business success.

Questions that were asked to participants to know their opinion about the factors that impact service quality were 12,13 & 20. After analysing the data received from participants, responsiveness is the second most selected choice for participants that effect service quality and hence proved the Hypotheses true.

H11: There is a relationship between responsiveness and customer's satisfaction

The customer is considered to satisfy if the queries raised by customers are resolved promptly and timely. The responsiveness of the company matters a lot in customer's satisfaction level. The increase in customer responses has a likely positive effect on customers satisfaction. Rad et al. (2010).

Analyses based on questions 10,14 & 19 suggested a direct relationship between responsiveness and customer satisfaction and proved the Hypotheses true.

H12: There is a relationship between responsiveness and customer's trust

The easiest way to win customers trust is the accuracy and speed of the companies response that gives the customer a feeling of security with the company. Responsiveness is a nonverbal cue to clients about how motivated and trustworthy they are (Wallace, 2020).

In the data received from questions, 11,15 & 21 respondents consider responsiveness 2nd most important factor that impacts the customer's trust. The Hypotheses is proved true with literature review and data analysis.

H13: There is a relationship between tangibility and service quality

In a study (Melián-Alzola & Padrón-Robaina 2006), Tangibility is an essential factor in giving perceived service quality and affecting a customer's purchasing choice. Also, Santos (2002) researched phone surveys on over 400 participants suggested that Tangibility positively impacts service quality.

In the data analysis on questions 12,13, and 20, the relationship of tangibility and service quality is proved, and so the Hypotheses.

H14: There is a relationship between tangibility and customer's satisfaction

Tangibility, as a combination of elements such as content and structure of a website, gives a pleasing experience to the participant that ultimately gives a level of satisfaction to the customer. (Kassim & Abdullah, 2010).

The data received from question 10,14, and 19 suggests that there is a relationship between customer's satisfaction and tangibility; however, the number of participants remained low.

H15: There is a relationship between tangibility and customer's trust

In eCommerce, the only communication channel is the website and how a business presents its products and services. Tangibility is the only way to win customers trust. According to Habeeb and Sudhakar (2019), the designer should design the website to get most of the required information on the product page only, which gives a participant a feeling of trust. Also, In the absence of accurate and complete information, organisations may lose trust if a consumer's trust does not stay on the website, and organisations lose customers due to improper information Liao et al. (2006).

Also, the data received from 11,15 and 21 are analysed and found that there is a relationship between customer's trust and tangibility.

H16: There is a relationship between empathy and service quality.

To increase the level of service quality, a company must give customer's a feeling of personalisation. As per Li and Suomi (2009), Empathy is the special attention given to the participant that increases the level of service quality in the business.

The data received from question 12,13, & 20 suggests that there is a relationship between service quality and empathy; however, the impact is not huge, but there is surely a relationship.

H17: There is a relationship between empathy and customer's satisfaction.

As per Cho & Hu (2009), the role of assurance in building customers satisfaction is quite significant. Assurance gives a personal touch to the business, which makes customers satisfaction level higher.

Also, the analysis on data received on question 10,14 and 19, it is concluded that there is a direct relationship between assurance and customers satisfaction

H18: There is a relationship between empathy and customer's trust.

As per the study (Rita et al., 2019) conducted to know the effects of service quality dimensions, customer satisfaction and customer trust suggest that assurance and customer trust are co-related.

And the analysis of data received on question 11,15, and 21 concludes that there is a direct relationship between assurance and customer's trust.

6. Conclusion

The need for the eCommerce business has evolved in the modern era. People have started using websites and web applications to order products and services, especially in a country like India, where the population is humungous, and the internet is easily accessible. Most of the population prefers to avoid the traffic and busy markets. The solution for them is eCommerce. But with such a huge population and audience, eCommerce businesses have understood the need for service quality, customer's satisfaction, and customer's trust. This research shows the impact of these factors on the eCommerce business is a deciding element for a business to become profitable. Customer retention and buying intentions are dependent on these factors. For example, suppose a company provides good service quality to a customer. In that case, the customer's satisfaction level becomes high, and the customer starts trusting the business that leads him/her to prefer the business over others.

This research found that literature review and survey responses both suggest the importance of these factors in an eCommerce business. Previous studies find the factors as the key elements that impact the purchase intentions of the customers. And data received from the surveys also find that participants understand the importance of these factors.

This research also suggests that the service quality dimensions are the factors that decide the level of service quality, customer satisfaction and customer's trust. In the data analysis, reliability stands as an important factor for all three factors (service quality, customer's satisfaction and customer's trust). However, along with reliability, two more factors are found the most important factors. For service quality and customer satisfaction, participants preferred responsiveness as the second choice for customer's trust participants selected assurance as a second choice.

The analysis are carried out with literature review, findings of previous studies and data collected from the surveys. The consolidated results of analysis showed importance of small factors that can contribute in the business a lot. The five service quality dimensions are proven to be important factors to improve service quality, customer's satisfaction and customer's trust, that further influence the overall eCommerce business. The most important factors found in the study may guide the eCommerce industry that how to increase the level of service quality, customer satisfaction and customer's trust. The overall study and findings also supports that the purchasing intentions are directly associated with these factors. this research may help eCommerce companies to put there efforts to work on improving the service quality dimensions. This research also can help the researchers to find the analysed

findings and solutions for their research.

6.1. Limitations

As with the findings of this research, the researcher also acknowledges the limitations associated with this research. The limitations of this research are given below.

6.1.1. Time Constraint

The insufficient time of this research stood out to be the critical limitation for this research. The data collection was done only in 4-5 weeks which would not be enough to gather responses from a broader audience.

6.1.2. The Number of participants

As the time was limited and the researcher had to prepare the report within the given period, the responses collected were remained lower than the statistically significant number of 600. Thus, unfortunately, the researcher could not use the tools that may prove the Hypotheses for this research and had to do the analysis based on the literature review and data collected from online surveys.

6.1.3. Inefficient in Following Trends

The data was not collected in intervals of time but at a certain point in time, which may generate different results for specific trends.

6.1.4. Casual/Dishonest/Biased responses

As the data was gathered through online surveys, there is always a possibility of casual/dishonest/biased results. Participants may have selected the options casually. Also, the responses could be given just to complete the survey without focusing on the intention of the question.

6.1.5. Limited literature for the Indian market

The literature found for this research was limited to the Indian market. Previously researchers used the servqual model for different countries. The business environment in India may have different requirements from eCommerce, and the literature may have focused on certain markets and not India specifically.

6.2. Future Work

This research represents the factor important for the eCommerce business in India and the dimensions important for these factors (Service quality, Customer's satisfaction & Customer's trust). The SERVQUAL model has predefined dimensions that impact the business, and in this research, the existing dimensions are analysed.

In the survey, people are given the options to select others from the predefined dimensions. Many people have selected others options like Customer Support, Website Design, Ease of Use, Delivery of products and services while answering the question.

The future research shall try to cover these dimensions that affect specifically eCommerce factors and their audience. The SERVQUAL model was developed for ordinary businesses and not specifically for eCommerce business. The future work shall reveal the factors that impact the eCommerce business and the dimensions that affect those factors. Also, the future work shall cover other countries in Asia such as China, Pakistan, Malaysia and Singapore, where eCommerce is becoming more and more popular every day. The main objective of the future work shall be:

- Know the impact of other factors than service quality, customer satisfaction and customer's trust on an eCommerce business.
- Dimensions like the ease of use, website design, content, customer service, delivery services etc., to be explored with their effects on the factors.
- Adding new countries in the research and find If there are any behavioural changes in the participant preferences.

6.3. Concluding Remarks

eCommerce is a growing industry in India and Worldwide. Along with the development in the eCommerce sector, the need to retain a customer becomes equally important as the business's survival depends upon the returning customers.

While analysing the literature and online survey data, it was observed that Service quality, customer satisfaction, and customer trust are factors that directly impact the customer's purchase intentions. Better service quality helps a business win customers trust and satisfy their expectations that retain a customer into a business in results.

Also, the SERVQUAL dimensions are equally important to positively affect service quality, customer's satisfaction and customer's trust directly.

The literature review also helped to formulate the research questions for this research. To conduct this quantitative research approach was used within the post-positivism framework. As the research was about the dimensions and factors of service quality, the SERVQUAL model was used in this research as a research framework. The data collection was collected through online surveys, which were later analysed and discussed in the report. The limitations and future work are also presented in the report.

For sampling, a sample size of 600 participants was expected within the population size of 6,00,00,000 was considered, with a confidence interval of 4 and a confidence level of 95%. The number of total participants remained 404, which is lower than the expected participation, and there might be different reasons for lower participation. Like, interest and availability of the participants. Also, the covid 19 situations in India could be the reason for a lower number of participants where people of India are struggling with the pandemic. It would not be good to expect participants to participate in any bodies survey.

The research results suggest that all three factors (service quality, customer's satisfaction, and customer's trust) impact eCommerce business. And all Hypotheses was proven true fully except H14 and H16, which were partially true.

In the last, the research could cover more dimensions and factors that are specifically meant for eCommerce business and surely shall be covered in future research.

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Appendices

Survey Questions

| | | |
|------------|--|--|
| Question 1 | Are you over 18 years of age? | |
| | Option 1 | Yes |
| | Option 2 | No |
| | | |
| Question 2 | Have you recently shopped online (from Indian ecommerce company) in last 1 year? | |
| | Option 1 | Yes |
| | Option 2 | No |
| | | |
| Question 3 | Which of the following factors matters the most while shopping online? | |
| | Option 1 | Service Quality of e-commerce firm |
| | Option 2 | level of customer's satisfaction |
| | Option 3 | level of customer's trust in e-commerce business |
| | Option 4 | None of the above |
| | | |

| | | | |
|-------------|--|----------------------------|--------------------------|
| Question 4 | has your previous experience of bad service quality impacted the online shopping decisions? If yes, please elaborate on how. | | |
| | Option 1 | Yes | If Yes, Please Elaborate |
| | Option 2 | No | |
| | Option 3 | Had no such bad experience | |
| | | | |
| Question 6 | has your trust in e-commerce firm impacted your online shopping decisions? If yes, please elaborate on how. | | |
| | Option 1 | Yes | If Yes, Please Elaborate |
| | Option 2 | No | |
| | Option 3 | Had no such bad experience | |
| | | | |
| Question 8 | Has customer satisfaction factor in an e-commerce firm impacted your online shopping decisions? If yes, please elaborate on how. | | |
| | Option 1 | Yes | If Yes, Please Elaborate |
| | Option 2 | No | |
| | Option 3 | Had no such bad experience | |
| | | | |
| Question 10 | Pick the two most critical factors that impact customer satisfaction | | |
| | Option 1 | Reliability | |
| | Option 2 | Tangibility | |
| | Option 3 | Assurance | |
| | Option 4 | Empathy | |
| | Option 5 | Responsiveness | |


| | | |
|-------------|--|--|
| | Option 6 | Others (like Ease of use, Mobile application, Customer Service etc.) |
| | | |
| Question 11 | Pick the two most critical factors that impact the customer's trust | |
| | Option 1 | Reliability |
| | Option 2 | Tangibility |
| | Option 3 | Assurance |
| | Option 4 | Empathy |
| | Option 5 | Responsiveness |
| | Option 6 | Others (like Ease of use, Mobile application, Customer Service etc.) |
| | | |
| Question 12 | Pick the two most critical factors that impact the service quality | |
| | Option 1 | Reliability |
| | Option 2 | Tangibility |
| | Option 3 | Assurance |
| | Option 4 | Empathy |
| | Option 5 | Responsiveness |
| | Option 6 | Others (like Ease of use, Mobile application, Customer Service etc.) |
| | | |
| Question 13 | Which of the factors can improve the overall service quality in e-commerce business? | |
| | Option 1 | Reliability |
| | Option 2 | Tangibility |
| | Option 3 | Assurance |
| | Option 4 | Empathy |

| | | |
|-------------|---|----------------------|
| | Option 5 | Responsiveness |
| | Option 6 | None of the above |
| | | |
| Question 14 | Which of the factors can improve the overall customer satisfaction in e-commerce business? | |
| | Option 1 | Reliability |
| | Option 2 | Tangibility |
| | Option 3 | Assurance |
| | Option 4 | Empathy |
| | Option 5 | Responsiveness |
| | Option 6 | None of the above |
| | | |
| | Which of the factors can improve the overall customer's trust in e-commerce business? | |
| Question 15 | Option 1 | Reliability |
| | Option 2 | Tangibility |
| | Option 3 | Assurance |
| | Option 4 | Empathy |
| | Option 5 | Responsiveness |
| | Option 6 | None of the above |
| | | |
| Question 16 | To what extent does service quality matters in the overall e-commerce experience of a user? | |
| | Option 1 | To a great extent |
| | Option 2 | To a moderate extent |
| | Option 3 | To some extent |

| | | | | | | | |
|-------------|---|----------------------|--------|-------|-----------|--------|-------|
| | Option 4 | To a small extent | | | | | |
| | Option 5 | Not at all | | | | | |
| | | | | | | | |
| Question 17 | To what extent does customer's trust matters in the overall e-commerce experience of a user? | | | | | | |
| | Option 1 | To a great extent | | | | | |
| | Option 2 | To a moderate extent | | | | | |
| | Option 3 | To some extent | | | | | |
| | Option 4 | To a small extent | | | | | |
| | Option 5 | Not at all | | | | | |
| | | | | | | | |
| Question 18 | To what extent does customer's satisfaction matters in the overall e-commerce experience of a user? | | | | | | |
| | Option 1 | To a great extent | | | | | |
| | Option 2 | To a moderate extent | | | | | |
| | Option 3 | To some extent | | | | | |
| | Option 4 | To a small extent | | | | | |
| | Option 5 | Not at all | | | | | |
| | | | | | | | |
| Question 19 | How often do the options given below impact customer satisfaction? | | | | | | |
| | Option 1 | Reliability | Always | Often | Sometimes | Seldom | Never |
| | Option 2 | Tangibility | Always | Often | Sometimes | Seldom | Never |
| | Option 3 | Assurance | Always | Often | Sometimes | Seldom | Never |
| | Option 4 | Empathy | Always | Often | Sometimes | Seldom | Never |

| | | | | | | | |
|----------------|---|----------------|--------|-------|-----------|--------|-------|
| | Option 5 | Responsiveness | Always | Often | Sometimes | Seldom | Never |
| | | | | | | | |
| Question 20 | How often do the options given below impact service quality of e-commerce business? | | | | | | |
| | Option 1 | Reliability | Always | Often | Sometimes | Seldom | Never |
| | Option 2 | Tangibility | Always | Often | Sometimes | Seldom | Never |
| | Option 3 | Assurance | Always | Often | Sometimes | Seldom | Never |
| | Option 4 | Empathy | Always | Often | Sometimes | Seldom | Never |
| | Option 5 | Responsiveness | Always | Often | Sometimes | Seldom | Never |
| | | | | | | | |
| Question 21 | How often do the options given below impact customer trust? | | | | | | |
| | Option 1 | Reliability | Always | Often | Sometimes | Seldom | Never |
| | Option 2 | Tangibility | Always | Often | Sometimes | Seldom | Never |
| | Option 3 | Assurance | Always | Often | Sometimes | Seldom | Never |
| | Option 4 | Empathy | Always | Often | Sometimes | Seldom | Never |
| | Option 5 | Responsiveness | Always | Often | Sometimes | Seldom | Never |

Ethics forms

| | |
|---|---|
|  | <p>Research and Postgraduate Office (RPGO)</p> <p>Human Ethics in Research Group (HERG)</p> |
|---|---|

LOW-RISK HUMAN ETHICS IN RESEARCH APPLICATION FORM

Please refer to the [Ethics Guidelines](#) prior to completing this application.

The RPGO is located at the City Campus, D-Block (Offices D2.22 – D2.24), e-mail research@wintec.ac.nz or phone Megan Allardice on Ext. 3582 for more information.

Please see the last page of this document for detailed instructions for completing this form.

1.0 PROJECT TITLE

| | |
|--|--|
| | Impact of Service Quality on E-commerce business in 'India.' |
|--|--|

2.0 RESEARCHER(S)

| | | |
|------|--|---|
| 2.1 | Primary researcher's name | Meet Makhija |
| 2.2 | School//Centre/Unit | Centre of Business and Information Technology |
| 2.3 | Contact Details (Telephone and E-mail) | Ph: 02040201754 E-mail: meemak01@student.wintec.ac.nz |
| 2.4 | Is this application a: | <input checked="" type="checkbox"/> Student Application <input type="checkbox"/> Staff Application |
| 2.5 | If this is a student application, please provide the Module code here | INFO803 |
| 2.6 | Is this project a staff application that utilises work partially or wholly undertaken by students who are not participants (e.g. data collection undertaken by a researcher's class)? | No |
| 2.7 | If so, please clearly describe what the role of these students is to be in this research, what the work will be used for explicitly (including any issues regarding authorship of research outputs such as journal articles), and what steps have been taken to ensure students are aware of this. | NA |
| 2.8 | Name of other Researcher(s) and positions. (If this is a student application, please provide the name(s) of the project supervisor(s) and indicate that they are supervisors here.) | Dr Kay Fielden |
| 2.9 | Contact Details of other researchers and/or supervisors (Telephone and E-mail) | E-mail: Kay.Fielden@wintec.ac.nz |
| 2.10 | Is this application: | <input checked="" type="checkbox"/> A new application |

| | | |
|--|--|--|
| | | <input type="checkbox"/> A subsequent approval request following a significant change to an already approved application |
|--|--|--|

3.0 PROJECT TIMELINE

| | |
|--|--|
| | <p>The projected start date for data collection (<i>once this ethics application is approved. Please note, projects can only begin once applications have been approved, regardless of the level of risk</i>):</p> <p>Projected end date: End of 1st Semester 2021</p> |
|--|--|

4.0 PROJECT SUMMARY (please include your research purpose and objectives, the methodology will be dealt with in Section 6)

This study is regarding the impacts of different factors like service quality, customer satisfaction, and customer trust on e-commerce business. This research explains that how service quality, customer satisfaction, and trust impact e-commerce business and how factors like reliability, assurance, Tangibility, responsiveness, and empathy are essential in achieving the level of service quality, customer trust, and satisfaction.

5.0 PROJECT METHODOLOGY (including methods for data collection)

This research project shall be conducted through an online survey where 18 questions shall be asked from the participants to record their opinion, reasons, and level of satisfaction with e-commerce. To create an online survey, Qualtrix will be used. The population size for this research shall be 600 participants. The calculation is done based on 600 Million Internet users in India with a confidence interval of 4 and a confidence level of 95%. Some online tools shall be used to analyse the recorded data.

6.0 CONSIDERATION OF ETHICAL ISSUES AND PROCESSES

Ethics

The research will address applicable ethics requirements thoroughly as discussed below:

Risk of harm

- This research is to investigate the effects of various variables on e-commerce in India and involves literature reviews and surveys only to collect the data from participants.
- This research will be done through online surveys with questions related to clients' experience with e-commerce organisations that will not cause embarrassment, discrimination, discomfort, anxiety, or insecurity to participants.

Informed and Voluntary Consent

- In the research, participants will be informed about the topic and the proposed research before the beginning of the survey and only allow participants to participate in the survey who provide written consent before starting the study. The research would only allow participants who are above 18 years of age and shopped online at least once.


Privacy and Confidentiality

- All the questions in the survey are about the experience of users with eCommerce companies, and none of the questions is about the personal information that may reveal the identity of a participant.
- All data collected will be stored in a password-protected laptop and Wintec OneDrive.
- The collected data will be purged after three months of the research completion.

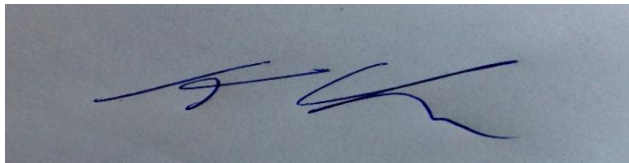
Conflict of interest

- The research will engage participants from India who have online shopping experience to understand the impacts of service quality, customer satisfaction, and customer's trust on eCommerce business without any Wintec staff or student participation.

Researcher(s) signature(s) (the name and signature of all researcher(s) are to be included):

| Name | Signature | Date |
|--------------|--|------|
| Meet Makhija |  | |
| | | |
| | | |
| | | |
| | | |

Primary Supervisor's signature (if this is a student application):

| Name | Signature | Date |
|----------------|--|------|
| Dr Kay Fielden |  | |

| Research Leader's signature: | | |
|------------------------------|-----------|------|
| Name | Signature | Date |
| | | |

| HERG Chairperson or delegated representative's signature (RPGO use only): | | |
|---|-----------|------|
| Name | Signature | Date |
| | | |

COMPLETING THIS FORM

Please note: A low-risk research project is one in which the nature of the potential/actual risk of harm to participants or the researcher is minimal and no more than is typically encountered in daily life. If,

as a staff member, you are new to research or, are in any doubt as to which application to submit, please consult with your Research Leader. If you are a student, your Supervisor will be able to give you advice. If you are still in any doubt, don't hesitate to consult the RPGO.

Specific Instructions

- All questions are to be answered. Note the questions within require a mix of descriptions, yes/no answers and cross the box (**Double-click on checkboxes with your mouse and select 'Checked' from the options under 'Default Value'**).
- Research Leaders need to review the information in this form and sign it off prior to the application being made to the RPGO.
- Please forward one signed original copy to the RPGO, together with an electronic version to research@wintec.ac.nz.
- Low-Risk Human Ethics in Research Applications also need to be accompanied by a copy of the Information Sheet, Consent Form, and any Questionnaires or Interview Schedules for consideration. If Questionnaires/ Schedules are not yet confirmed, please supply the latest draft.
- No questions are to be deleted, even those that you feel you are not required to answer.
- No part of the research requiring ethical approval should commence prior to approval being confirmed.
- Applicants will receive official confirmation of submission via e-mail from the RPGO once all conditions of this form have been completed.
- If you want to apply for an extension on a previously approved project, please contact the RPGO, as you will probably not need to submit a separate application.
- Applicants will be advised of the outcome of their application to the Human Ethics in Research Committee **no later than ten working days** after the completed and confirmed submission of this application.

HUMAN ETHICS IN RESEARCH LOW RISK APPLICATION FORM - CHECK LIST

| | |
|-----------------------------|--|
| Research project title: | Impact of Service Quality on E-commerce business in 'India.' |
| Name of primary researcher: | MEET MAKHIJA |

Attached please find (as applicable) in the order listed below

| | |
|---|---|
| Completed HERG Low-Risk Application Form | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Consent Form for participants | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Information Sheet for participants | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Copy of Focus Group Questions, Interview Schedule, or similar | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

Participation Form

Waikato Institute of Technology
Tairāwhiti Street, Private Bag 3036
Waikato Mail Centre
Hamilton 3240, New Zealand

Telephone +64 7 834 8600
Freephone 0800 2 Wintec (0800 2 946 832)
www.wintec.ac.nz



Project Title: Impact of Service Quality on E-commerce business in 'India.'

Participant Consent Form

(One copy to be retained by the Research Participant and one copy to be maintained by the researcher)

I attest to the following:

1. I have been informed thoroughly of the purpose and aims of this project
2. I understand the nature of my participation
3. I understand the benefits that may be derived from this project
4. I understand that I may review my contributions at any time without penalty
5. I understand that I will be treated respectfully, fairly and honestly by the researcher/s, and I agree to treat the other participants in the same way
6. I understand that I will be offered the opportunity to debrief during or after this project
7. I have been informed of any potentially harmful consequences to me of taking part in this project
8. I understand that I may withdraw from the project at any time (without any penalties)
9. I understand that my anonymity and privacy are guaranteed, except where I consent to waive them
10. I understand that information gathered from me will be treated confidentially, except where I consent to waive confidentiality
11. I agree to maintain the anonymity and privacy of other participants and the confidentiality of the information they contribute.

Principal Researcher: MEET MAKHIJA

Date: 02/10/2020

Participant Information Sheet

Title of the project: Impact of Service Quality on E-commerce business in India

About the survey:

This survey is regarding e-commerce service quality, customer satisfaction, trust, and their impacts on the overall business. Eighteen questions in total will help to know the effects of these factors on e-commerce business.

The purpose of the research project

The purpose of the research is to figure out the airline companies' services. This research will help to find out the satisfaction level of customers and what customers want and how do those factors impact the buying decision of a user?

What is expected of participants?

The participant will provide unbiased, complete, and correct information. The participant will understand the purpose of this research and survey questions.

How long it will take

The survey will take approximately 5-7 minutes.

Where the data will be collected

The data will be collected on a password protected computer. The researcher can access that computer.

What will do to the information provided?

The data and information will only be used for the analysis related to this research and shall not be misused. The data or information shall not be shared with any other individual or company and shall be deleted once the research is completed.

Whether it is compulsory to participate

Participant's consent, age over 18, and at least have shopped one time online is mandatory for participation.

Whether participants can withdraw and how

There are no terms or rules attached to the survey. Participants can withdraw anytime. Without submitting the form, it shall not capture any details into the database.

How participant privacy is to be protected

There are no questions asked in the survey that may lead to the disclosure of any personal information. No personal information is captured at any stage of the survey. Participants are not asked for any personal details like name, phone number, or e-mail ID that may reveal your identity. All the collected data will keep safe on a password-protected computer.

Where research results will be made available

The data analysis and results shall be published in the Masters Research report.

Details for participants who have any further enquired:

If any participant has any inquiry regarding this survey or research, send me an e-mail anytime. I will respond as soon as possible.

Name of Researcher: Meet Makhija

Contact Details: meemak01@student.wintec.ac.nz

Date: 02/10/2020